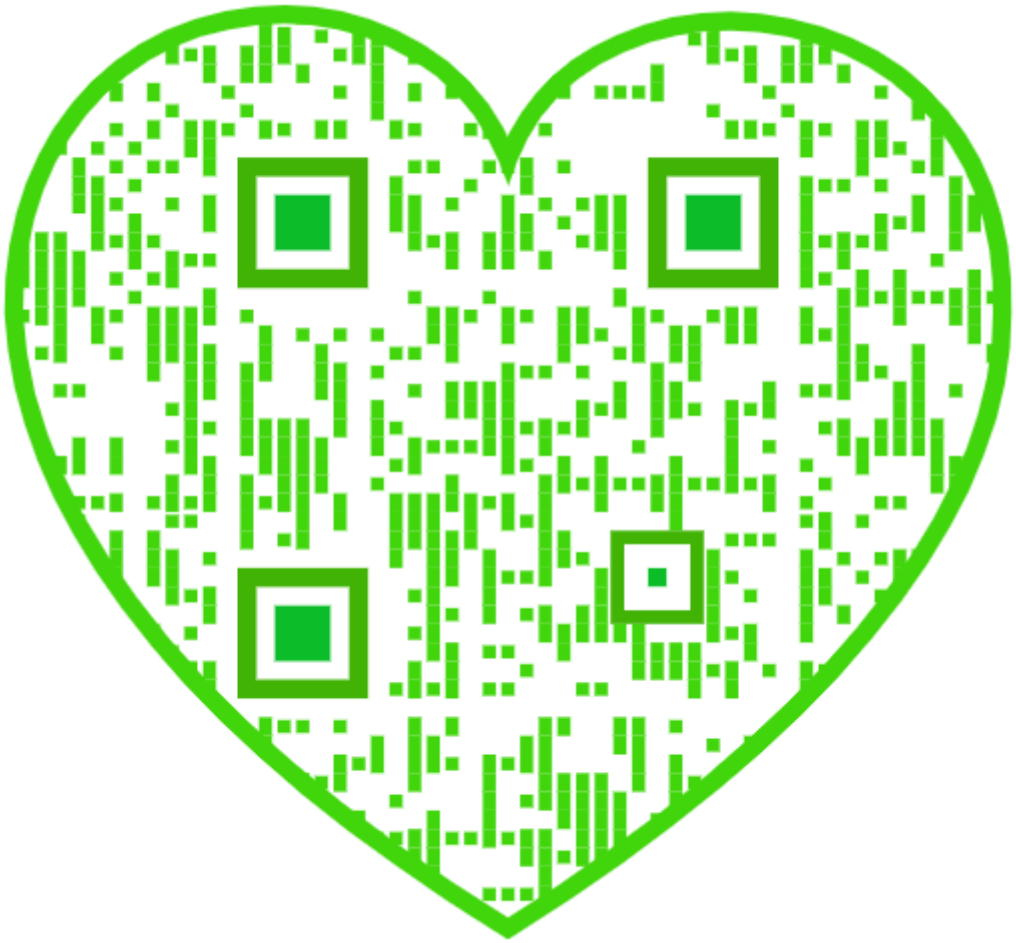
MEALS MEDICINAL.



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MEALS MEDICINAL:

WITH

"HERBAL SIMPLES,"

(OF EDIBLE PARTS)

Curative Foods from the Cook; in place of Drugs from the Chemist.

BY

W. T. FERNIE, M.D.,

Author of "Herbal Simples," "Animal Simples," "Kitchen Physic," etc., etc.

"Bound in vellum, and tied with green tapes," was a small booklet, published at Liege, 1610—"the *School of Good Living*; beginning with Cadmus the Cook, and King, and concluding with the Union of Cookery and Chymistry."—We borrow its exordium to-day. "The writer confidently trusts as to his readers that many will be found to kiss this little volume heartily, to thumb all its pages, and to carry it in their hands both day and night."

BRISTOL: JOHN WRIGHT & CO.
LONDON: SIMPKIN, MARSHALL, HAMILTON, KENT & CO., LTD.

1905

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TO

OUR "LITTLE MARYS"

(PLAYFULLY NAMED);

WITH

THE HOMAGE OF A LIFE-TIME

SPENT IN

THEIR SERVICE.

PREFACE.

It is told that Sir Walter Scott, having occasion to seek medical aid unexpectedly in a small country town, found a doctor there, one John Lundie, a grave, sagacious-looking man, attired in black, with a shovel hat, who said, "My practice is vera sure: I depend entirely upon twa simples." "And what may they be?" asked Sir Walter. "My twa simples," replied John, in a low confidential tone, "are just laudamy and calamy." "Simples with a vengeance!" quoth Scott; "And how about your patients, John?" "Whiles they dies: whiles no," answered he, "but it's the wull o' Providence."

Little did the said doctor surmise that, comprehended within his two simples, lay many constituent principles owning distinct activities, and which have since then become analysed into separate medicaments. The laudamy (opium) has been found to comprise no less than twenty-one elements, all with divers physical, and chemical properties, (some indeed antagonistic); whilst the calamy is understood now-a-days to exercise a wide variety of effects, determinable by varying methods of its use: these "twa simples" thus making together an ample pharmacopœia of drugs. But those were times of comparatively rude physic, and of rough-shod medical treatment.

Our assumption, to-day, is that (in lieu of drugs) an adequate sufficiency of component curative parts stands similarly embodied within most of our ordinary dishes and drinks.

if judiciously appointed and skilfully applied. It rests with the enlightened physician, and the well-informed housewife, to make themselves practically acquainted with these principles for cure, as possessed by foods and beverages which can be specially prepared and prescribed for the several maladies as they come under management. In which respect we likewise in our case advocate a practice of treating the sick and the ailing, chiefly with "twa simples," representative of leading kinds, to wit the Cabbage and the Egg. These are our laudamy and calamy of to-day, our compendiums of restorative, sedative, and alterative powers and virtues. The Cabbage, as Culpeper reminds his readers (1650), "was, for Chrysippus his god, and therefore he wrote a whole volume about it and its virtues; whilst honest old Cato, as men said, made use of no other physick." In common with its vegetable congeners it affords sulphur, a potential antiseptic; also an abundance of mineral salts for tissue-building and repair; starches, too, as fuel for the bodily combustion; and volatile aromatic oils in rich plenty, as of special virtues for subduing and repelling diseases. Similarly concerning the Egg, this is aptly pronounced "the only complete food afforded by the animal kingdom, for full sustenance, and physical curative benefits." It comprehends all the alimentary substances required for the support and maintenance of animal life; contained within its body are proteids for structural renovation, arsenic, phosphorus, easy to assimilate, an antibilious oil of remarkable energy, fats against wasting illness, iron to reanimate the bloodless, and lime salts (largely present in the shells) to subserve numerous other reparative ends.

But far be it from our meaning to imply that of comestibles and drinks, besides the Cabbage, the Egg (and perhaps

Milk, as a third representative support), other therapeutic forms of food are lacking, up to any number, from the cook, or of healing potions from liquid sources as supplied for the table. Convincing evidence to the contrary is borne by the copious testimony of the lengthy volume which we now undertake. It will be found that an entire armament of weapons is provided herein, ready at hand for active service alike in sickness and during convalescence therefrom. Some of the food principles obtained thus, are indeed so potent as to become poisonous if accumulating redundantly in the blood.

"Somnambulism," says Dr. Wynter Blyth, "can be produced by starches in excess within the body so as to form *amylene*; under the influence of which toxin a person will walk about unconsciously in the same way as the somnambulist does. Afterwards, when the effect goes off, the said person becomes all right again." So again a sulphur compound, *mercaptan*, may be produced in the digestive chemistry of certain foods which have been taken at table, causing therefrom an intense melancholy, almost leading to suicide. "I have no doubt," adds Dr. Blyth, "the day is coming when it will be proved that several forms of mental derangement are due to substances resulting morbidly from food products inside our own bodies."

As long ago as in the seventeenth century the *Aqua Toffana* played a notorious part in serving to destroy (by its secret admixture with the Naples drinking-water) more than six hundred persons, among whom were two popes. This poison is said to have been prepared by killing a hog, disjointing it, salting it (as it were) with arsenic, and then collecting the juice which dropped from the meat; which juice was considered far more fatal than an ordinary solution of arsenic. Combined therewith was a little plant which is most familiar

to ourselves,—the ivy-leaved toad-flax, (*linaria cymbalaria*), or "mother of thousands,"—growing commonly on old garden walls, and now esteemed as harmless, though bitter and astringent. Again, our English King John, of disreputable memory, is recorded to have shut up Maud Fitzwalter the Fair, in the dingiest and chilliest den of the Tower; and, when neither cold, nor hunger, nor solitude broke her strength, while she still disdained his shameful suit, he foisted on her a poisoned egg, of which she ate and died.

The leading motive of the present work is, then, to instruct readers, whether medical or lay, how to choose meats and drinks, which can afford precisely the same remedial elements for effecting cures as medicinal drugs have hitherto been relied on to bring about: and which, *plus their vital force*, are of supreme advantage, because energetically derived straight from the fresh animal and vegetable sources. So that a culinary "Materia Medica" will stand thus competently and agreeably provided, on which dependence can be placed, even with greater trust than on prescribed drugs.

In previous publications we have discussed at some length the groundwork of Vegetable, Animal, and combined Alimentary Physic. That our *Herbal Simples* fairly met a public requirement in this direction, was proved by the speedy demand for two editions of the said Manual, insomuch that it has been for the last three years out of print, the publishers repeatedly urging a third edition; and therefore the main portions of *Herbal Simples* are reproduced in the present *Meals Medicinal* (particularly as regards their curative edible belongings). But of our *Animal Simples*, and *Kitchen Physic*, scarcely any of the same literary substance finds place again here, except in brief allusion, and plainly stated as such; furthermore some few of the pleasantries are repeated, for

adding zest to the present fare, with a better savour, like that of a twice-cooked curry. "*Sæpe stylum vertas, iterum quæ digna legi sint scripturus.*"

Having done assiduous scullion service in these three branches of medicinal apprenticeship, and thereby acquired a skilled knowledge of the complete culinary art, as to its needs and methods for the benefit of the sick and the sorry, we now promote ourselves to the advanced office of a physician *chef*; and we proceed to furnish curative nutriment of as finished a quality as prolonged experience, and the modern scientific progress of the times in such regard, justify us in attempting to advance. Our *menu* provides a complete dispensatory of remedial diet, applicable to the treatment throughout of most diseases and ailments. Its *modus medendi* is made lucid and plain, so that any intelligent reader may straightway pursue its directions. As to our discursive condiments interposed, such "Digressions," saith Tristram Shandy, "are incontestably the sunshine, the life, the soul of reading; take them out of this book, for instance, you might as well take the book along with them. One cold, eternal winter would reign in every page of it; restore them to the writer, he steps forth like a bridegroom, bids all hail, brings in variety, and forbids the appetite to falter. All the dexterity is in the good cooking, and management of them, so as to be for the advantage, not only of the reader, but also of the author." Nevertheless, *Si te forte meæ gravis uret sarcina chartæ,—abjicito!*

For ourselves we venture to adopt the instructive parable related by Saint Luke in his gospel: "A certain man has made a great supper, and bids many thereto. He sendeth forth his servant to say to them that are bidden, "Come, for all things are ready." Idle excuses, let us hope that but

few will begin to make. Else we shall have to seek further in the streets and lanes of the city, for bringing in hither the poor, and the maimed, the halt, and the blind ; which being done as commanded, there will yet be room.

Our forefathers did not forget piety in their feasts. At the Coronation of Henry the Sixth, 1429, "After a soteltie (at the first course) of Seynt Edward, and Seynt Lewis, armed in their cootes of armes," the second course opened with a "Vyaande inscribed with the *Te Deum Laudamus.*" "In the third course was again a soteltie of our Lady syttynge, holding hyr child in hyr armes, in every hand a crowne, and Seynt George knelying on oon syde." Finally then, in the same spirit, we "Bless the Trinity which hath given us health to prosecute our worthless studies thus far : and we make supplication with a *Laus Deo*, if in any case these our poor labours may be found instrumental to weede out bodily ailments, black melancholy, carking cares, and harte grief, from the minds of men.—*Sed hoc magis volo quam expecto.—I, nunc liber ;* goe forth my brave treatise, child of my labours with the pen ; and ye, *candidi lectores*, lo, here I give him up to you : even do with him what you may please, my masters!" "All we know of the matter is, when we sat down, our intent was to write a good book : and, as far as the tenuity of our understanding would hold out, a wise, aye, and a discreet : taking care only, as we went along, to put into it the wit and judgment, (be it more or less) which the great Author and Bestower of them had thought fit originally to give us : so that, as your worships see, 'tis just as God pleases." "Take therefore, gentle readers, in good part what's projected for thee : so shall our pains not quite want their recompense ; nor thyselves be branded with the base mark of mean ingratitude." "Fare ye well!"

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MEALS MEDICINAL:

WITH

"HERBAL SIMPLES,"

(of Edible Parts.)

INTRODUCTION.

THE purpose of this Handbook is to explain what are the curative constituents of such dishes, and table-waters, as a Doctor can adequately order instead of drugs, when prescribing against diseases; these same matters of diet being actually medicinal, though in the pleasant guise of eatables, and drinks, to suit the palate. It will be found that no reason whatever can be urged why curative meals of such a character shall not be always effectively employed for treating sick persons: indeed, why nauseous medicaments shall not be altogether supplanted by savoury productions from the cook, and the vintner. Pursuing which methods the Doctor, when minded to administer certain remedies hitherto dispensed by the Chemist, will remember, or learn (for he does not always know) how to fulfil his object far more agreeably through help from the kitchen. Thus also the patient may be led to comprehend how such, and such culinary preparations can do him equal good in lieu of repulsive doses from the Apothecary; and he, or she will gratefully accept welcome meats, and refreshing drinks, in the place of potions, or pills, for curing definite diseases, as readily as for purifying, purging, or strengthening the system. Furthermore, after this manner the intelligent cook, becoming apprised of the properties, and virtues which her roasts, and stews, her vegetable purées, and her choice confections, are able to convey, if

thoughtfully admixed, and carefully handled, will gain well-merited promotion in the esteem, and approval of those who profit by her important domestic services, instead of employing the druggist.

Nearly three centuries back some such an enlightened practice of cure was foreshadowed by Dr. Tobias Venner (1620), "Doctor of Physicke at Bathe, in the Spring and Fall." When dedicating his "*Via Recta ad Vitam longam*" to the Right Honourable Francis Lord Verulam, Lord High Chancellor of England, "In regard," wrote he, "of the worthines, and utilitie of the subject, this is '*the Dieteticall Part of Physicke*,' which for preservation of health appertaines to all men (but to none, as I suppose, more than to your Honour, who, under His Majestie, doth chiefly wield the State of our Reipublique"). Again (in 1685), Liebnitz, the famous German philosopher, said, in a letter to Denis Papin (who invented the Digester which bears his name): "As regards internal medicine, I hold that this is a mere art like that of playing nine-pins, or backgammon. I have often wished that a skilful physician should write a book '*De curandis per dietam morbis*,'—about curing diseases by means of the diet." "There will come a time," as a recent writer of note predicts, "when no medicines will be administered, except in acute, and sudden attacks. Disease will be remedied by foods; the intelligent house-mother is testing the value of this assertion in the daily ordering of meals for her family, seeing that a newly-acquired knowledge of dietetics has put her on the way to such enlightenment." Celery, for instance, is found to be so constituted as to be curatively efficacious for persons suffering from any form of rheumatism, also for nervous indigestion, and kindred nervine troubles. Water-cress contains principles which are remedial against scurvy. Pea-nuts, which are rich in fats, and proteids, may be specially commended for the rescue of diabetics. Onions are almost the best nervine strengtheners known, no medicine being equally useful in cases of nervous prostration, or so quick to restore, and tone up a jaded physical system. Asparagus, by its alkaloids, will induce salutary perspiration. Carrots will relieve asthma. Eggs, especially their yolks, will disperse jaundice, and can be given for clearing the voice. Instead of iron as a chalybeate, the pulp of raw beef, or animal blood in black puddings, will prove an efficient substitute; whilst the bitter Seville orange will admirably

take the place of quinine as a prince among tonics for debilitated persons.

Nevertheless, before the subject of cure, or prevention, of disease by a dietary regimen, as skilfully adapted to the needs, and condition of patients under their several ailments, can be properly mastered, its alphabet of fundamental parts, and chemical ingredients must be diligently acquired, at all events in outline. Just after the same fashion with regard to our daily methods of speech; in order to talk correctly, so as to convey the full significance, and true purport of what is said, the speaker must first learn the grammar of sentences, and the etymology of words. It is true the colloquial discourse of untutored rustics will generally suffice to rudely express the sense of what they desire to convey. But this, after all, is only a hit-or-miss method, altogether unreliable, and not worthy of imitation. For example, the Devonshire rustic says: "I be that fond ov cowcumbers I could aight 'um to ivery meal, I could: but I niver did zee nobody zo daainty az yu be: yu carn't aight nort like nobody else." Again, a Devon ploughboy, sick with measles, exclaims: "Brath! whot, brath agin! Why 'twas brath yisterday! brath tha day avore! brath tu day! an mayhap 'tweel be brath agin tu-morrar! I'll be darned ef I'll be keep'd 'pon brath!" Or, "Poor old Mrs. Fangdin be gettin' dotty, th'of er've a knaw'd a theng or tu in 'er lifetime, za well's Dr. Budd, 'er ave."

This same art of adapting cookery to the wants of sick, and delicate persons was, as we learn from Dr. Thudicum's *Spirit of Cookery* (1895), systematically treated for the first time by Walter Ryff, in 1669; and again in subsidy at considerable length by Scappi, the cook of Pope Paul the Fifth, who gave two hundred culinary receipts for the sick, and for the convalescent, instructing his pupils that if they omitted these things they would fail much in their duty. He therefore described how broths, soups, jellies, barley-water, and such foods should be made. He particularly advised light soups concocted of oysters, snails, frogs, tortoises, and turtles.

John Evelyn likewise tells in his *Acetaria* (1699): "We read of divers Popes, and Emperors, that had sometimes learned physicians for their master-cooks; and that of old an excellent cook was reckon'd among the *eruditi*."

Sydney Smith, later on, in a letter to Arthur Kinglake (1837), advanced a proposition much to the same effect: "I am

convinced," said he, "digestion is the great secret of life; and that character, talents, virtues, and qualities are powerfully affected by beef, mutton, pie-crust, and rich soups. I have often thought I could feed, or starve men into many virtues, and vices, and affect them more powerfully with my instruments of cookery than Timotheus could do formerly with his lyre. Frequently is it that those persons whom God hath joined together in matrimony, ill-cooked joints and badly-boiled potatoes have put asunder."

"There is" (to quote the *Lancet*, December, 1901) "a striking point of view from which the cook may be brought to the aid of the practical physician. If, for example, it were clearly shown that drugs such as are now used only in formally-prescribed mixtures, or pills, are capable of being introduced into the more welcome productions of the domestic kitchen, how grateful an assistance we should obtain! It is often difficult, where a medicine has to be taken frequently, and over long periods of time, to be sure that the patient does not grow careless, or forgetful. If, however, instead of taking his draught before, or his pill after his daily meals, the said draught, or the requisite pill, were (without altering the taste of the dish then served, and without losing its own efficacy) combined with the patient's dinner, instead of preceding it, or following it, we can imagine a far more certain acceptance thereof on his part; and the physician's orders would be more consistently carried out by connivance on the side of the cook than they are with the co-operation of the chemist. Such a relegation of the dispenser's duties to the hands of the *chef* can only be achieved by familiarity in the mind of the medical man with the work of both his sub-ordinates. As to that of the druggist, he is perhaps fairly cognizant; with that of the cook it is to be strongly recommended that he shall become more intimately acquainted."

And, indeed, if only on historical grounds, medical men should specially interest themselves in foodstuffs, and their preparation. From early times, when the functions of priest, and physician, were united in the same man, and when votive offerings, and therapeutic agents were alike prescribed, and dispensed by his hands, the association of the culinary, and healing arts has been always a close one. There is a fund of useful lore, and information, in the old accounts of the various properties, and powers with which writers from the earliest times invested different articles of diet. Thus Pliny tells it as the opinion of

Cato, that after eating hare, sleep is induced; but the common people rather suppose that after partaking of such food the body is more lively, and gay for the next nine days. "This may be only an idle rumour; but still for so widespread a belief there must be some foundation." And whether such is really the case, or not, an investigation into the exact properties of the flesh of various animals, and into those appertaining to other articles of diet (as shellfish, for instance, which are known to exercise peculiar effects upon certain persons) would not only prove of immediate interest, but might lead to results of great therapeutic value. "Chemical work of this sort is a most fitting direction in which to turn the efforts of such clinical laboratories as are sure in the future to be more, and more extensively employed in connection with all large general hospitals." "There are many widespread beliefs, and theories with regard to the effects of different foodstuffs in health, and disease, but exact knowledge on such points is scanty. We cannot doubt that in attempting to enlarge, and to define it, direct, or indirect results of importance, and utility would be certainly obtained." "It is obviously of the greatest moment that if a physician orders a medicine he should be able to tell that it is duly dispensed; but this is not feasible unless he could dispense it, if necessary, himself; and, conversely, a man familiar with the modes of dispensing will have far wider powers, and greater ingenuity, and will apply drugs with more minute efficiency than one who prescribes them whilst lacking any such intimacy with the materials which he is recommending. A similar argument may certainly be applied to the products of the kitchen. Yet, if a large number of medical men can claim familiarity with drugs, and the methods of dispensing them, few, we imagine, will assert an intimacy with these processes of the kitchen, or even to any considerable extent with the materials which are used therein, and the daily employment whereof they may have many times advised. No doctor can ignore the importance of diet both in health, and in disease; and the cook may well be regarded as a chief officer in the service of medicine, curative or preventive. It is, without doubt, in the daily provision of wholesome, digestible dishes that the main function of the kitchen lies. Nevertheless, no medical man can afford to neglect its aid when he is reckoning up his therapeutic resources; and more particularly to-day, when the use

of animal extracts in medicine has become so prominent, should the importance of the kitchen be properly recognized."

There is an indisputable measure of truth in the allegation that the qualities of the food affect both mind, and body. Buckle (*History of Civilization*) took this view, when trying to show that the character of a people depends much on their diet. The theory he has advanced is that the properties, and virtues, or vices, of what is eaten pass into the system of the eater; confirmatory of which view an incident has lately been made public of an English gentleman at Shanghai who, at the time of the Taeping attack, met his Chinese servant carrying home the heart of a rebel who had fallen in fight, and which he meant to eat in order to make himself brave. Thus, too, a well-known Professor of Medicine at Berlin used to say in his lectures, that "a doctor ought to be at home, not only in his laboratory, but likewise in the kitchen"; the truth of which dictum is occasionally apparent when practitioners, in prescribing diets for patients, are embarrassed by questions relative to the proper methods for cooking the same. The great majority of medical men are unable to give precise instructions to a cook; while, nevertheless, on the other hand, many unqualified practitioners impress the public mind by affording careful directions as to the preparation of foods for the sick, who therefore prefer to consult these irregular advisers. Recently two ladies in Berlin,-superintendents of Cookery Schools for young women, have arranged to give special courses there for doctors. "This offer," says *The Lancet*, "should be heartily welcomed by those who think that medical training in such respects ought to be much more practical than has hitherto been the case."

At the International Health Exhibition, London, 1884, Dr. Andrew Blyth, in his authoritative manual issued by the Council, concerning "Health by Diet," wrote prophetically of a time, which is now happily at hand after twenty years of steady medical progress. His admirable publication began with these words: "When by successive researches the Science of Diet has become better understood, without doubt a School of Physicians will arise, discarding all drugs, and treating maladies by cutting off certain foods, and by surfeiting with others; if, indeed, there is not at the present time ready formed in the highest representatives of modern medicine the nucleus of this future School of Dietetics. There are diets suited for every age,

for every climate, for every species of work, physical, or mental; there are diets by which diseases may be prevented, and cured; there are diets fitted for some constitutions, injurious to others; diets which make the skin glossy, the frame vigorous, and the spirits joyous; others which mar the face with wrinkles, speckle the body with eruptions, and make the form lean, hollow, and prematurely old."

Two or three classes of disease may be taken as forcibly illustrating the importance of treating them specially by foods such as are particularly indicated during their pathological course. Hippocrates thought most highly of good judicious feeding in fevers, recommending wine, and the ptisan of barley (which we now call gruel), so made that it "may be thin, but not too thin: thick, but not too thick." Dr. R. Graves, 1848, again, has rendered himself famous by maintaining not only in words, but also in deeds, that the feeding of fevers is the most essential feature in their cure. His plan was to restrict the patient only for the first three or four days to gruel, barley-water, and whey, proceeding quickly after this time to chicken broth, meat jelly, and strong soup; the great art of duly nourishing fever patients consisting, as he taught, in giving a frequent, almost continuous, supply of liquid nourishment containing very soluble aliments, in a dilute form. "Let it be the chief aim to restore that which the thoughtful observer can clearly see is passing exhaustively away,—nitrogenous tissue." Likewise with regard to hysterical affections, such as hypochondriasis, and others of a like nature, a generous nitrogenous diet is essential in their treatment, particularly in one peculiar form of this malady which arises from eating too sparingly of vegetables, and too abundantly of meat. It is distinguished by the high specific gravity of the urine, mounting from 1025 to 1035, as dependent on the presence of urea alone, in excess, and no sugar. There is in these cases often a remarkable lassitude, and even an apparent paralysis of the limbs occurring suddenly after exertion, and sometimes there is bodily wasting; both of which symptoms usually lead the patient and his friends to attribute the morbid state to insufficient nutrition, and therefore to increase more and more the proportion of meat in the food, in despite of the ailment becoming aggravated thereby. A rapid cure of such a patient will attend the diminution of the meat meals to one daily, and the supplying their place with plenty of well-made porridge,

and of green vegetables. Similarly, the advantage of treating many persons commonly insane through an ill-fed brain, by an ample and nutritious diet is daily forcing itself more and more on the convictions of the proprietors of lunatic asylums, though their business interests would, of course, prompt them to an opposite course of proceeding.

Once more, as to unsound states of the heart, the dietary of persons having this organ imperfect of function, or structure, should be more nitrogenous than if they were healthy in such respect. "What we have to dread," says Dr. Chambers, "is the wasting degeneration of the heart's muscular walls; for, until such degeneration ensues the original lesion is not aggravated, and the constitution will often become so used to the altered mechanism of the heart, that no inconvenience of any sort is felt; if the muscular structure remains healthy, the injured valves do not seem capable of causing the organ to stop in its pulsations. Persons in easy circumstances have valvular lesions for years and years, perhaps through the greater part of a long life, and not only continue to live, but even fail to experience symptoms bad enough to make them consult a doctor. Now the main hope of warding off this wasting degeneration lies in the maintenance of a full, generous diet, easily digested, so as to keep the blood red, and fluid for the continuous repair of the endangered muscle. But in the reverse condition of heart, when there is a state of habitual high arterial pressure, as proved by the hard pulse, and the tense circulatory conditions, then boiled fish once a day is the best animal food. Such a state of high pressure will be probably depending on a want of elasticity, or tone in the coats of the arteries, increased perhaps by the contact of blood surcharged with waste products of nitrogenous food. And for such symptoms it would be altogether wrong to allow strong meats, or any alcoholic drinks."

"It is remarkable" (*Medical Press*, 1902) "that physicians and hygienists but rarely venture to face the realms devoted to the culinary art. The medical practitioner often blames the drains, or complains of the drinking-water, or grumbles at the lack of fresh air; but when does he venture to enquire into the ways, and means of the cook?" "There would be no difficulty in showing that the selection, preservation, preparation, and serving of the food of a household are among the most vital factors in influencing its health. The main part

of the problem of life can be expressed in terms of food, whilst much of the indisposition, and many of the minor ailments of everyday life, are directly the outcome of a neglect of hygienic practice in the kitchen. If the illnesses met with in 'high life' are to be effectually dealt with, the ignorance, and neglect often made manifest in 'low life' must not be forgotten. We hope the author of *Kitchen Physic* (1901) will see fit to supplement his discourse by a work dealing with Kitchen Hygiene."

Accordingly, such a compendium of explanatory dietetics is now undertaken, with the conjoint purposes of enlightening the cook, of treating diseases by effective medicinal constituents given at table, and of helping the doctor with points of reference ready at hand concerning the meals which he may best advise for each case as it comes before him. Moreover, he will thus become further furnished with a serviceable stock of culinary suggestions, suitably adapted for such patients as seek his help by correspondence: in which way, when economy of time for immediate study, and research, is an object (the attention being, moreover, of necessity otherwise occupied), important questions concerning appropriate forms of sustenance can be expeditiously solved by a ready reference to our Manual.

> "But now the Cook must pass through all degrees,
> And by his art discordant tempers please,
> And minister to health and to disease.
> Homer, less modern, if we search his books
> Will show us that his Heroes all were Cooks:
> How lov'd Patroclus with Achilles joins
> To quarter out the ox, and spit the loins."

In the earlier ages of the world, no palled appetites are recorded, but such as proceeded from the decays of nature by reason of an advanced old age. On the contrary, we are told of a hungry stomach even upon a deathbed, as with patriarchal Isaac. Nor were there other sicknesses but the first, and the last. For two thousand years, and upwards, there were no physicians to prescribe for ailing persons, nor any apothecaries to compound distasteful medicines. Food and physic were then one and the same thing. Primeval mankind, gaunt, brown, and savage, in a state of nature, fed upon roots, fruits, vegetables, and wild animals, all without culture, or cooking. By-and-by, through the transference of the digestive work—in part to the sun as a cooking power, and partly to fire in a like capacity—

some measure of his released physical energy, together with an increase of intellect, became wrought in man, and this lessening of the digestive strain had more than one marked effect on his body, and physical aspect. The heavy, protruding jaws, once so necessary for masticating huge quantities of coarse innutritious food, became smaller, and more receding; whilst along with this recession of the jaw there was produced a progressive, or forward, and upward growth of the brain—the lower giving place to the higher—the animal to the man: whereby we see that the advancement of the human race has been largely the result of diet. Manifestly, then, the course of our own evolution depends on ourselves; we may, according to our own conduct day by day, be building up a better body, and a better mind, or else one that shall be worse than the fair promise of the original germ. And, therefore, it is self-evident that the philosophy of preparing such materials as go to build up, and renew the body, and the brain, must be well worthy of the most careful study; which philosophy is the Chemistry of Cookery. Right deservedly, then, by a parity of reasoning, does Dr. Rabagliatti, of Bradford make it to-day a leading aphorism of modern medicine, that "*Morbi ii qui non mederi victu possunt, vix, vel maxima cum difficultate, medendi sunt*"—"those diseases which cannot be cured by victuals are scarcely curable anyhow."

Moreover, this substitution of medicinal constituents for cures by foods, instead of by physic, has its humorous side; at least so think our American cousins, (who are up to date in such respects), with their "Vassar Pie":—

"Give me a spoonful of oleo, ma,
And the sodium alkali,
For I'm going to make a pie, mamma,
I'm going to make a pie:
Poor John will be hungry and tired, my ma,
And his tissues will decompose;
So give me some grains of phosphate,
With carbon, and cellulose.

Now hand me a chunk of casein, ma,
To shorten the thermic fat;
And pass me the oxygen bottle, ma,
And look at the thermostat:
And, if the electric oven's cold,
Just turn it on half an ohm,
For I want to have supper ready, ma,
As soon as John comes home.

Provide me the neutral dope, mamma,
Give a turn to the mixing machine;
But hand me the sterilized water first,
And the oleo-margarine;
With the phosphates, too; for now I think
His mate in the office has quit,
So John will need more phosphate food
To help his brain a bit."

It frequently becomes the duty of a doctor to see that the diet of his weakly patients is enriched in special directions, most commonly perhaps in those of light meats, and fats. But of course to advise chicken, and cream for a man with a slender purse would be a useless proceeding; he simply could not afford to buy these luxuries. It is therefore worth while to remember that cheaper sources of the necessary building material are to be found in skim milk, in such oily fish as herrings and sprats, sound new cheese, and the more easily negotiated pulses, as lentils, haricot beans, etc.; whilst very economical forms of digestible fat—as Dr. Hutchison teaches—are margarine, and good dripping. On the contrary, with regard to *drugs*, which are costly, "there is not in all the Pharmacopœias a single active article, which has not in conjunction with its virtues the vice of deranging more or less the gastric digestion. It is this which makes it a medicine, and not a food."

Concerning diet as contravening the symptoms of diseases, Dr. Merriman, of Ohio, wrote thus (*Medical Record*, 1902), "The point I wish to make is this, that in my opinion the time is ripe for an entire revolution in the administration of drugs. The proper ingestion, and the proper digestion of food, constitute the most successful field of healing now known to man. Why, therefore, should not every well-informed physician write prescriptions exclusively for foods, whilst prohibiting those articles of diet which are known to induce conditions causative of the malady he is anxious to cure? Is not this the opportune moment for the physiological chemist to furnish reliable data upon which each physician may construct a suitable diet for every patient, or group of patients? Correct dietaries for the brain-worker, the manual labourer, and the average citizen whilst in good health, have been accurately estimated by the scientific experts in Government employ; but the properly adjusted diets for patients troubled with gout, rheumatism, and allied illnesses (due mainly to harmful products retained within their bodies, and which must be helpfully neutralized, whilst their

future formation is likewise prevented) are still but imperfectly understood by the average medical practitioner." "Give us good Cooks," writes Dr. Kellog, of Michigan, "intelligent cooks, cooks who are thoroughly educated, and then the cure of nine-tenths of all the dyspeptics may be guaranteed, without money, and without medicinal treatment." Again, "those bodily infirmities to which so often a constitutional bias is inherited from birth, such as consumption, rheumatism, and gout, may be prevented from development, or held in complete check, by the discipline of diet pursued from childhood, and with a healthful relish. Instead of having to learn painfully, and laboriously throughout the proverbial first forty years of his life, how to become his own physician (or to remain a fool), every man may take practical heed to the lessons which our pages shall plainly teach, and may steer clear of peril throughout a prosperous physical course of years from infancy to the said meridian of life, and onwards to a robust old age."

"A good Coke," saith Dr. Andrew Boorde, 1536, in his *Dyetary of Helthe*, "is half a Physycyon."

"Fair woman, could your soul but view
The intimate relation
'Twixt food and fate, there'd be a new,
And higher dispensation.

Could you but see for "destiny"
A synonym in dinners,
And what the kitchen's alchemy
Can make of mortal sinners,
You'd leave odd fads, and learn to bake
A loaf, and cook a "tater";
To roast a joint, or broil a steak,
Than which no art is greater!

'Man cannot live by bread alone,'
'Tis well and wisely spoken;
But make that bad, he'll die unknown,
And give the world no token
Of high ambitious potencies,
Or genius' slumbering fires,
Inbred in him through galaxies
Of grand illustrious sires!

Then all ye dames, and maidens fair,
Who burn with high ambition,
Who crave to nobly do your share
To better man's condition,
You'd give us, could your soul but view
The intimate relation
'Twixt food and fate,—ere long—a new
And higher dispensation."

"There are," according to Dr. Thudicum, "cynical persons who profess to despise, or, at all events, rate lowly the liking for good food which the French call *fricandise*." Such a refinement of food, however, is not only the efflux of culture, but also has an important influence on the mind, and consequently upon the abilities, and manners of a man. "Tell me what you eat, and I will tell you what you are," (to paraphrase a saying concerning the influence of the company you keep) is equally true here. Many persons mistake a natural desirable daintiness for gluttony, or *gloutonnerie*, as Montaigne once termed it "*la science de la gueule*," or, "the science of the gullet." We hold absolutely with the *gourmandise des esprits delicats*: if this cannot be satisfied, then vitality is diminished, and life is shortened. The wit of the Parisians has embalmed for themselves *la fricandise* in an imperishable form. "*Avoir le nez tourné a la fricandise comme St. Jacques de l'Hospital*," is an expression to the point, derived from an image of St. Jacques de l'Hospital placed over the building of that name, near the Rue des Oies, at Paris. In this street were the shops of the principal meat roasters, and as the saint in effigy looked in the direction of the frying shops, he was said to have "*le nez tourné a la fricandise*."

That cookery can be made almost a fine art even by mere intuition has been exemplified humorously in *Behind the Bungalow* (1892), where Domingo, the barefooted, native, untaught Indian servant, exhibits a wonderful fecundity of invention, and an amount of manual dexterity marvellous to behold. And the wonder increases when we consider the simplicity of his implements, and materials. These consist of several copper pots, a chopper, two tin spoons (which he can do without), a ladle made of half a cocoa-nut shell at the end of a stick, and a slab of stone with a stone roller on it; also a rickety table (a very gloomy, and, ominous-looking table, whose undulating surface is chopped, and hacked, and scarred, begrimed, besmeared, smoked, oiled, and stained with the juices of many heterogeneous substances.) On this table he minces meat, chops onions, rolls pastry, and *sleeps*; a very useful table! He takes up an egg, gives it three smart taps with the nail of his forefinger, and in half a second the yolk is in one vessel, and the white in another. The fingers of his left hand are his strainer. From eggs he proceeds to onions, then he is taking the stones out of raisins, or shelling peas. Domingo observes no such formula as that of the English cookery

book, "Wash your hands carefully, using a nail-brush," but wipes his fingers frequently upon his pantaloons, which are blue checked, of a strong material made for jails, and probably in two pairs, the sound parts of one being arranged so as to underlie the holes in the other." But this is by way of a diversion, as touching our main argument.

Again, in China, as Dr. MacGowan, of Shanghai, relates, "little distinction is made between "materia medica," and "materia alimentaria"; certain curative properties being ascribed to most articles which are used as food. Nearly all portions of animals (the human frame included) are suppcsed to be efficacious in the treatment of disease. Some of such animal substances are macerated in fermented, or distilled liquors, and are termed "wines;" thus there are mutton wine, dog wine, deer wine, deer-horn wine, tiger-bone wine, snake wine, and tortoise wine."

In a thesis for the degree of Doctor of Medicine recently presented to the University of Paris, M. Jean Barrier has embodied the results of a historical research as to the therapeutic preparations of animal origin employed dietetically by the ancients. In the Asclepeia of Greece bull's blood, and ass flesh were prescribed for consumptives. Preparations of serpent were also largely in use. Hippocrates, although he mostly used simples, occasionally prescribed ox-gall, the dung of asses, and goats, etc. Celsus recommended fox's liver, or lung, in asthma, and the hot blood of a newly-killed gladiator in epilepsy. Pliny's *Natural History* is an encyclopædia of organo-therapy. From him we learn that the ancients used certain glands of the hare, the stag, the horse, the pig, and the hyæna, as aphrodisiacs, and as remedies for epilepsy, a disease for which the human brain was also employed. Renal colic was treated with hare's kidneys, boar's bladder was in repute for dysuria, the hyæna's heart for cardiac palpitation, the partridge's stomach for colic. Similar food-medication found favour with the Arabian physicians. Albucasis taught that the human brain could be nourished, and strengthened by eating cock's brains; hen's gizzard was excellent for the stomach; in short, each organ could be kept in order, or functionally improved by the administration of the corresponding organ of an animal, served at table.

To sum up our subject—vitally important as it is—the foremost advance of modern science now at length holds out a promise of prolonging healthy life *by a suitable broth*, far beyond the present

limit of threescore years and ten, or fourscore years "with labour and sorrow." Here steps in M. Metchnikoff (Professor at the Pasteur Institute,) with a new theory abounding in hope, and courage. "Old age," says he, "results because of our protective white corpuscles in the blood having devoured all their habitual enemies the microbes, and being compelled at last, for lack of other nourishment, to batten upon the nobler organs of the human frame. In a few years, we predict that at the Pasteur Institute, or elsewhere, we shall discover a serum, or animal juice, or gravy, which will supply these white corpuscles with their necessary food, thereby preventing exhausting demands on the bodily organs, and will thus prolong the vitality of heart, and brain, and lungs in the human individual." *En attendant*, my friends, return to nature (and abjure drugs !), lead a simpler life, diminish the number of your desires, and learn that old age will then cease to be an infirmity. Honoured, useful, in full possession of all his faculties at six score years and ten, the greybeard of the approaching future will be among the most enviable of mankind." "The fact is that only one man in a million at present dies a natural death. We should live until one hundred and forty years of age. A man who expires at seventy, or eighty is the victim of an accident, cut off in the flower of his days; and he unconsciously resents being deprived of the fifty years, or so, which nature still owes him. Leave him a while longer, and in due season he will desire to depart, as a child at bedtime desires to sleep.

To "Go thy way then," shall be our final exhortation. "Eat thy bread with joy, and drink thy wine with a merry heart. Let thy garments be always white; and let thy head lack no ointment." "A merry heart doeth good like a medicine; but a broken spirit drieth the bones."

MEALS MEDICINAL.

ABSINTHE.

ABSINTHE is a liqueur used largely in France, being concocted in the main from the herb Wormwood (*artemisia absinthium*) which yields an essential oil consisting chiefly of absinthol. This oil is the basis of the said liqueur, the effects whereof, when taken to excess, are frequent giddiness, and attacks of epileptiform convulsions. Much diluted doses of the liqueur, if carefully administered, will materially relieve ailments of this same character which are determined by physical irregularities within the body. One teaspoonful of the absinthe twice a day with a wineglassful of cold water for an adult patient.

The original absinthe was a harmless medicament, prepared and used by a French physician named Ordinaire, who was living as a refugee in Switzerland at the close of the eighteenth century. He was a country doctor, and a druggist, cultivating in his little garden the herbs for making absinthe, then without alcohol. But the French "absinthe" of to-day is a highly aromatic, intoxicating liqueur, of an opaline green colour, and with a bitter taste. It is prepared by steeping in alcohol, or strong spirit, certain bitter herbs, of which the chief are *artemisia absinthium*, and *artemisia mutellina*, with *artemisia spicata*, each a wormwood. The mode generally practised of drinking this liqueur is by adding it to water, drop by drop, or by allowing it to trickle through a funnel having only a minute opening below; thus prepared, it is styled "la hussarde," and is commonly supplied in the cafés of France, Italy, and Switzerland.

When indulged in as an appetizer by connoisseurs, absinthe, the "fairy with the green eyes," is modified by admixture with anisette, and is of note as an "agreeable and bronchitis-palliating liqueur." If served sparingly at table, and not taken habitually, it soothes spinal irritability, and gives tone to persons of a highly

nervous temperament, acting closely after the manner of those alkaline bromides which constitute drug remedies as prescribed almost specifically for these same bodily ailments. Suitable allowances of the diluted liqueur will promote salutary perspiration, and may be given, moreover, for successfully expelling intestinal worms. The use of Absinthe as a stimulating dram, with comforting effects, prevailed at one time amongst French soldiers at Algiers, but led to baneful results because taken too freely. It is now, therefore, forbidden throughout the French army.

Wormwood, as employed in making this liqueur, bears also the name "*wermuth*," or "*keep mind*" (preserver of the mind), from its supposed medicinal virtues as a nervine, and mental restorative.

Inferior Absinthe, such as is retailed at the popular bars, and cheap cafés in Paris, and the French provinces, at three halfpence the glass, is generally adulterated with copper for producing the characteristic green colour. To swallow repeated doses of this pernicious stuff in the early morning is called "killing the worm." Inveterate absintheurs are found to drop down dead in the streets every day that dawns in Paris, either from apoplexy, or because of heart failure; yet merrily "strangling the parrot" (as the term goes) is continued, and jests about "taking the blue" are as lively as ever! Unhappily, too, Absinthe may now be bought at most of our London West End public houses, and even the most casual observer can notice in these places that the absinthe habit is growing in our midst. To order an absinthe is regarded as a mark of some distinction. "Yet," said *The St. James's Gazette*, August 7th, 1902, "Absinthe is a liqueur which is particularly unsuited to the English temperament, except for medicinal uses under the guidance of a skilled doctor." The intensely bitter taste resides in its "absinthin."

Pepys tells in his *Diary*, November 24th, 1660: "Creed, and Shipley, and I to the Rhenish Wine House, and there I did give them two quarts of wormwood wine." "Medical observation in France" (says *Herbal Simples*) "shows that this liqueur exercises through the pneumogastric nerve a painful sensation which has been taken for that of extreme hunger. The feeling goes off quickly if a little alcohol is then given, though it is aggravated by coffee: whilst under an excessive use of absinthe from day to day the stomach will cease to perform its duty,

an irritative reaction will come on in the brain, and the effects of blind drunkenness follow each debauch." Nevertheless, a controversial statement of quite an opposite character has been recently made in France by M. Cusenier, a manufacturer of absinthe, who attributes the superiority of his famous collection of live stock to the use for them of this liquor. He says he has made a practice of liberally feeding his rabbits, poultry, and guinea-pigs with oxygenated absinthe, and has produced the result that his creatures thrive much better than those of his neighbours using other nutriments. "The people," says he, "of the wine and spirit-making departments of France, where absinthe is the favourite beverage, are remarkably robust, and healthy."

By means of experiments on dogs, Professor D'Ormea has lately learnt that Absinthe, in common with the essences of aniseed, lemon, mint, and cinnamon, but more potently than these, has a very decided effect on the circulation of blood in the brain. They severally exercise a chemical action on nerve-centres which govern certain blood vessels in the brain-substance: and they may therefore be used remedially for such a purpose.

ACIDS

See FRUITS (APPLE, GRAPE, and LEMON); VINEGAR (MALT).

ALCOHOL.

This is chemically a toxin of the yeast plant, as the spirituous product of vinous fermentation (whereby are given intoxicating properties of varying relative strength to ardent spirits, wines, and malt liquors, the same product being powerfully stimulating, and remarkably antiseptic). There are different grades of alcohol, according to the source from which they are respectively derived; as "grain alcohol," prepared from maize, or other grain; "root alcohol," from beets, and potatoes; and "moss alcohol," made in large quantities from reindeer moss, and Iceland moss, in Norway, Sweden, and Russia. Such spirits as whisky, gin, and brandy contain from 40 to 50 per cent of absolute alcohol most wines contain from 7 or 8 to 20 per cent; and malt liquors from 2 to 10 per cent. Each molecule of alcohol consists of two atoms of carbon, six of hydrogen, and one of oxygen; it contains no nitrogen. When taken into the body alcohol burns by the carbon being set free and then combining with the oxygen, precisely as when paraffin is burnt in a motor car, being a source

of energy ; alcohol can be made to burn thus within the human body to compensate for the wasteful expenditure of animal heat in fevers, when digestion is arrested, and fails to furnish caloric. Nevertheless, during health only a limited quantity of alcohol can be burnt within the body each day, at the rate of not more than an ounce and a half of whisky, or brandy ; this quantity being well diluted, and taken in doses of half an ounce, at intervals of at least four hours. Such a quantity is all that the average man of normal temperature can utilise ; any excess beyond it will be harmful as a positive poison. Then again, alcohol is only a false stimulant, its action as such being in reality a protest of the heart's muscular walls against the noxious irritant; and such stimulation is invariably followed by a corresponding subsequent depression. As a drug, alcohol vexes the heart, which then sends blood with a rush to stagnate within the outermost blood-vessels in the skin, causing this briefly to feel warmer, though the internal body suffers a cold enfeeblement of the general circulation. Indeed, this loss of heat inside the system is so devitalizing that it often predisposes to pneumonia. Thus it comes about that the net result of taking alcohol, in whatever form, is to lower the inner temperature of the body. It is true that by dilating the blood-vessels of the general skin-surface a deceptive sense of warmth is induced because of the increased heat given off, for a short time only, by radiation, though alcohol does not really keep out the cold, but suffers the heat of the body to sensibly escape through the skin. During fevers, therefore, alcohol often renders helpful service by unlocking the surface blood-vessels, and thus setting free the mischievous, superabundant heat. If a person has been already exposed to chilling cold, and the blood has been repelled into the internal organs so as to stagnate there, with threatened congestion, then the timely administration of alcohol in a hot drink may save the situation by restoring a proper distribution of blood throughout the whole body. So that by all means let alcohol be thus taken when the person comes indoors wet, and shivering ; but it must be carefully avoided when proceeding out of doors to encounter frost, and rain, whilst the internal temperature would become lowered by any such a dram.

Alcohol has been proved to possess the power of producing antitoxic effects of an active sort against the tubercular disease of consumptive sufferers. If dock labourers who indulge

freely in alcoholic drinks, become affected by pulmonary consumption, it is found that (in spite of their harmful alcoholic excess) the mortality from this disease is less among those who drink heavily than in the more moderate imbibers. The alcohol appears to effect under certain circumstances a neutralization of tuberculous poison in the system; it acts further by serving to block up the blood-vessels around the diseased parts of the lungs, thereby isolating these infective parts; so that (as certain modern physicians pronounce) in all probability a plentiful (but not immoderate) use of alcohol promises true benefit for cases of actual tubercular consumption.

We may conclude generally that alcohol is an unnecessary article of diet for persons in complete health (though a moderate use of natural, sound wine seems to augment the agreeables of life). As regards the form in which alcohol may be best used, malted liquor seems most suitable for youth, wine for middle life, and spirits to be reserved for the aged. It cannot be said that alcohol is favourable to the production of perfectly sound brain work. Out of 124 instances (leading men in literature, science, and art) who were consulted on this question, none ventured to seriously recommend alcohol as a useful aid to the performance of mental labour. It is rather under conditions just short of health—in overwork, fatigue, and feeble old age—that the beneficial effects of alcohol become most marked, and chiefly by aiding digestion; therefore it is most profitably taken with meals only, in such quantity, and of such sort, as are best borne by the individual patient. But for aged persons with whom, by reason of their arteries being stiff through senility, and their circulation otherwise impeded about the surface of the body, a laborious action of the heart occurs under alcohol, with a liability of its walls to become dilated, then this is certainly questionable, particularly in the shape of ardent spirit; possibly some generous, well-matured wine of subdued alcoholic strength may be more safely allowed.

With regard to the taking of alcohol with water at night as grog for inducing sleep, when this has become difficult, or disturbed, any such practice is ordinarily a mistake. For natural sleep the brain should be comparatively bloodless; but a spirituous beverage as a night-cap produces quite the opposite effect; if the grog is strong, a measure of narcotism, and stupor may simulate sleep, but the penalty will be exacted afterwards

by reactionary depression. Only will a moderate allowance of alcohol at night be beneficial, when the general circulation is so weak, and inefficient at the end of the day, with depressed vitality, coldness, and feeble action of heart, that blood stagnates passively about the brain for lack of sufficient power to propel it onwards from the heart, and nervous centres. Under such a condition of things, then alcohol may be judiciously given, and will promote better sleep on rational grounds.

Boswell, talking to Dr. Johnson about the ethics of drinking, said, respecting himself, "I am a lover of wine, and therefore curious to hear what you say remarkable about drinking." This was *apropos* of a story as to Dr. Campbell quaffing thirteen bottles of Port at a sitting. "Sir," said Dr. Johnson, "if a man drinks very slowly, and lets one glass evaporate before he takes another, I know not how long he may drink. Nevertheless, wine gives a man nothing, but only puts into motion what has been locked up in frost. A man should so cultivate his mind as to have without wine that confidence, and readiness which wine gives." Someone then suggested, "It is a key which opens a box, but the box may be full, or empty." "Nay, Sir," said Johnson; "conversation is the key; wine is a picklock which forces open the box, and injures it."

Dr. Thudicum, in his *Treatise on Wines*, avers: "We have never known an authentic case of delirium tremens produced by drinking, in whatever excess, *natural wine*. Further, the habitual consumers of natural wine enjoy a remarkable immunity from gout, gravel, and such calculous formations as arise from the uric acid disposition; but no such immunity accompanies the use, or abuse of fortified wines."

Alcohol has surprisingly little effect by itself on the chemical processes of digestion. The immunity of the gastric juice within the stomach from the action of alcohol thereupon is very striking. It is also a decided antiseptic. But with gouty, diabetic patients alcohol is likely to act harmfully by delaying the disintegration which should occur of starchy, and fatty foods into their nutritive elements. Similarly, also, it hinders elementary changes in animal foods with gouty persons. Again, for female difficulties of monthly function copious hot drinks which are non-alcoholic prove most serviceable, by promoting a general opening of the skin pores throughout the entire surface of the body, and thus relieving internal congestions which are

attending the periodical epoch. To be sure, a stiff glass of gin and hot water given at the outset will seldom fail to confer ease and comfort, and to tide the patient over the immediate paroxysms of pain; but we cannot make sure that the single tumblerful of hot toddy taken in this way once a month will never be exceeded, or will not seductively lead to frequent future similar indulgences. Otherwise the remedy is an excellent one. Dr. Hutchison thinks that for diabetic persons, who are not also gouty, or of feeble digestive powers, alcohol may be very useful as a food, a source of energy, and an economizer of the proteids; further as helping materially in the digestion of fat.

Fifty, or more years ago our forefathers would drink liberally of Port wine (then of excellent quality, and therefore comparatively harmless), even whilst sojourning at one of the former famous hostelries. Thus, Mr. Pickwick, when taking up his abode for a time "in very good, old-fashioned, and comfortable quarters, to wit, the George and Vulture Tavern (City of London), had dined, finished his second pint of particular port, pulled his silk handkerchief over his head, put his feet on the fender, and thrown himself back in an easy chair, when the entrance of his man-servant, Sam Weller, aroused him from his tranquil meditations." Far less satisfactory, however, was the fare provided at the "Great White Horse," Ipswich (1828), where, "after the lapse of an hour, a bit of fish, and a steak were served up to the travellers (Mr. Pickwick and Mr. Peter Magnus), who, when the dinner was cleared away, drew their chairs up to the fire, and having ordered a bottle of port (of the worst possible kind, at the highest possible price) for the good of the house, drank brandy and water for their own." Again, "at Mrs. Bardell's house with the red door, in Goswell Street, the hidden treasures of her closet comprised sundry plates of oranges and biscuits, also a bottle of old crusted port, that at one-and-nine, with another of the celebrated East India sherry at fourteenpence, which were produced in honour of the lodger, and afforded unlimited satisfaction to everybody."

We are reminded, as the reverse of this picture, by Dr. King Chambers, when talking about the mighty hunters, and stalwart, robust herdsmen of wild, uncultivated nations, "that as soon as coming within the tide of civilization (and alcohol) the day goes against them: they fade away childless under our very eyes,

like that vast American tribe of which it is said the only extant remnants are a chief, a tomahawk, and six gallons of whisky."

It is remarkable that the common Acorn, as produced by our English Oak tree, has a property which will serve to antidote the effects of alcohol. A distilled spirit should be made from acorns, as the "*spiritus glandium quercus*," which will materially help to control an abnormal craving for intoxicating liquors; also, if taken in doses of from five to ten drops two or three times a day, this spirit will prove of immense aid in subduing morbid symptoms resulting from abuse of alcoholic drinks.

With our forefathers an old-fashioned, capacious wine-bottle was in vogue, known as a Jeroboam, being so called after the King who made Israel to sin. There was so much wine in such a big bottle that the topers were made drunk thereby, seeing that when once the cork was drawn the bottle could not be closed again. A Jeroboam is the largest bottle known. Rubaiyat, of Omar Khayyam, the Persian poet, so eloquently and faithfully translated by Edward Fitzgerald, glows with fervour about good liquor:—

"Here, with a Loaf of Bread beneath the Bough,
A Flask of Wine, a Book of Verse,—and thou
Beside me singing in the Wilderness,
And Wilderness is Paradise enow."

Beer, as mentioned by Herodotus, was brewed in Egypt 2,000 years ago. Sir Cuthbert Quilter has found at Luxor, on a monolith, the bas-relief of a tankard. Before the time of Elizabeth beer was drunk new in England, but in her day the farmers had become particular as to maturing their beer, and very choice in their ale; they named their best October-brewing "Mad dog," or "Angels' food," or "Dragons' milk," "Merry-go-round," and other endearing, or facetious appellations. Ladies during the eighteenth century, who were accustomed to drink ale, or small beer, or broth at breakfast, did not take kindly to tea when it was first introduced as a beverage. We read that the family of John Wesley drank small beer at every meal. They "bless'd their stars, and called it luxury." The addition of hops first (1524) converted our English ale into beer.

Sound beer should be only acid enough to slightly redden test-paper of litmus when dipped therein. As Dr. Chambers admonishes, "the first thing to be guarded against in malt liquor is sourness, or, as it is technically termed, hardness. All beer

will turn into vinegar after a time, but some brews undergo this degenerative change much more quickly than others, from having been run into dirty vats. In most of the popular London breweries the brewers calculate that the beer which is made will be consumed so quickly that the presence of a little more or less vinegar does not signify, and they brew daily in their vast vats still reeking so strongly of acetic acid that you cannot open your eyes when holding the face over these vats. And yet some of these reckless brewers occupy a most respectable position in society, go to church, and never ask forgiveness for the sickness, poverty, and misery they may have caused by their wilful negligence in this regard. There is no more fertile cause of gout, rheumatism, diseased heart, dropsy, and the premature death of the robust working man, than this beer, just on the turn, and ready to become thick vinegar in the stomach."

The famous Philip Dormer Stanhope (Lord Chesterfield), in one of his noted "letters" to his son Philip Stanhope (1874), says: "I hear from Duval, the jeweller, who has arrived, and was with me three or four days ago, that you are pretty fat for one of your age; this you should attend to in a proper way, for if while very young you should grow fat it would be troublesome, unwholesome, and ungraceful. You should therefore, when you have time, take very strong exercise, and in your diet avoid fattening things. All malt liquors fatten, or at least bloat, and I hope you do not deal much in them. I look upon wine and water to be in every respect much wholesomer."

"But what is Coffee but a noxious berry
Born to keep used-up Londoners awake?
What is Falernian, what are Port and Sherry,
But vile concoctions to make dull heads ache?
Nay, Stout itself (though good with oysters—very!)
Is not a thing your reading man should take:
He that would shine, and petrify his tutor
Should drink draught Allsop in its native pewter."

Though, as a quaint saying puts the matter pithily, "He who drinks beer thinks beer."

As concerning wines of various vintages, the leading character of a wine must be referred to the alcohol which it contains, and upon which its stimulating, or intoxicating powers chiefly depend. In the stronger ports, and sherries there is present from 16 to 25 per cent of alcohol; in hocks and clarets from 7 per cent

upwards. The principal modern wines are Port, Sherry, Bordeaux, Burgundy, Champagne, Madeira, Rhine, Moselle, Tokay, and Marsala. Sherry and Port are fortified wines; Claret and Hock are natural wines. "On the chemistry of food-digestion in the stomach wines exercise a retarding effect out of all proportion to the amount of alcohol which they contain; that produced on the second digestion by the stomachbread (pancreas) is to be accounted for by their acid qualities." Dietetically most wines are of equal value, provided they are the products of a favourable season, being pure, and free from fungous defects. It nevertheless by no means follows that because of hindering digestion in some respects, wines are altogether to be prohibited with meals; seeing that by increasing the appetite, and thus inducing a larger secretion of gastric juice, they may, if taken in moderate quantity, not only neutralize any arrest of the digestive chemistry in the stomach, but are likely to actually accelerate that function on the whole, and to make it more comfortable than it would otherwise be. "This, indeed," says Dr. Hutchison, "is one of the most useful actions of wine, both in health, and in disease." The stimulating action of a wine fortified with alcohol is to be considered twice as great as that of a natural wine. The acids of wine are chiefly present in the form of bitartrate of potash (cream of tartar), which eventually goes to increase the alkalinity of the wine; since the organic acids and their salts, which are combinations with earthy bases, as contained in wine, become converted within the body into alkaline compounds, and are excreted as such by the kidneys, and other outlets. It has been truly said "the human brain, and the human stomach are the only analysts which never make mistakes." Hock, for instance, which is a rather acid wine, if freely imbibed, tends to prevent the precipitation of gouty uric acid in the urine. And the same result follows cider-drinking as a rule; persons who use this beverage freely are not troubled with gravel; indeed, they are found to possess a special immunity from that grievance, for the cider not only makes the urine less acid, but also considerably increases its volume. It has been proved that as a matter of fact the most acid wines are not those which are most generally credited with producing gout. Possibly it is the combined presence of both sugar and acid in the wine for the time being which makes the sweet drink harmful to the sufferer from gouty

indigestion; and there is a likelihood, as we cannot deny, of secondary fermentation being then set up in the wine after it reaches the stomach. Be the explanation what it may, the gouty subject does wisely to avoid the fortified wines, unless when they have become very dry; otherwise the indigestion which ensues may set gout going viciously in the system.

Mattieu Williams explains, concerning the "cookery of wines," that he "feels quite safe in stating that the average market value of rich wine in its raw state—speaking of it as produced in countries where the grapes grow luxuriantly, and where the average quality of the wine is consequently superlative—does not exceed sixpence per gallon, or one penny per bottle; in saying which he is speaking of the best, and richest quality of wines, (of course, without including fancy vintages, or those specially produced in certain select vineyards of noted Chateaux), and he refers to 90 per cent of the rich wines that come into the market. So that, to tell the truth, the five shillings paid for a bottle of good Port wine is made up of one penny for the original wine, another penny for the cost of storage, about sixpence for duty, and cost of carriage to this country, and twopence for bottling, making a sum of tenpence in all; therefore it follows that the remaining four shillings and twopence are charged for "cookery," and wine merchants' profits."

The grape juice, which by fermentation makes wine, contains chiefly grape sugar, together with one part of fruit sugar, also albuminous matters, and the acids (principally tartaric, and tannic). This juice is obtained by crushing the grapes, usually by treading, so as to avoid squeezing the stalks, and stones too thoroughly. Hock is a Rhine wine, originally produced at Hockheimer, on the right bank of the Maine, but now the name is applied to any white German wine: it means literally "high home." Hocks are pale wines, and contain scarcely any sugar; they are really not more acid than claret. In Butler's *Hudibras* we read of this wine as having restored the high and mighty when faint:—

> "And made 'em stoutly overcome
> With backrach, hockamore, and hum."

The rosined wine which is served in the South of Europe has an admirable antiseptic virtue; though a British pedestrian, when he first quenches his thirst at a Tuscan farm, or rustic

inn, is apt to exclaim that the landlord has drawn the wine in a varnish pot, and to sneer accordingly at this balsamic "Vino Vermuth." But the taste is well worth acquiring by thirsty souls in warm climates, and merits the patronage of philanthropists, for it cannot be doubted that the wholesomeness of many Greek, and Italian native drinks is due to their being preserved from decay and secondary fermentation, by their rosin, in place of fiery and fuselly spirit. The large quantity of this wine habitually consumed without prejudice by its admirers is very remarkable. Six years ago there was living, and perhaps still lives, at Menidi, near Athens, a priest, over ninety years of age, who from early manhood had drunk a dozen bottles of wine every day, partly at meals, and partly at odd times. The American Consul ascribes this venerable toper's toughness to the special quality of his liquor.

The ethers of wines are volatile, and fixed; they confer much of the bouquet, particularly the œnanthine, or œnanthic ether. Port wine contains a large proportion of such ethers, especially the "fixed."

The colour of red wine is due to a pigment in the skins turned red by the acids of the grape juice, whilst the colour of white wines is caused by the oxidation of tannic acid in the cask. Different yeast plants adhering to the skin of the grapes distinguish different wines, which are first put into cask for some years and then bottled, the formation of ethers still going on. But it is a mistake to think that wine will continue to improve for an indefinite length of time; it is liable eventually to decay by the slow process of complete oxidation. Nevertheless "what magic there is in an old bottle of red wine! How beautiful it looks as the light shines through it! An old bottle of red wine! For years it has lain in the darkness, and rest of the cellar. For years there has been ripening within it a slow, soft life-warmth; a magical, fine spirit that will evoke for you dreams, and half-dreams of an entrancing sort. This old bottle of wine holds imprisoned within it a kindly genie which will transport you back to the balmy past—a past from which the bitterness has vanished. This kindly genie will soften for you the present; and he will show you the glimmer, and the wonder of the future! An old bottle of red wine! It is a precious gift that comes from out the divine essence of the earth! A fine elixir! It cheers and befriends, and soothes. It awakens in man

his larger and more potent self. It unravels, and unweaves before him fine thoughts—strange, curious thoughts. It unlocks the mind's marvellous, and mysterious recesses. It enriches, and enripens the personality. Under its genial spell a man becomes gay; a man becomes wise with the profound wisdom of tolerance; he laughs; his wit sparkles; a power new, and exalted is given unto him; he feels the glow of fraternity; he is brought within the circle of a benignant kindly magic; the cares of yesterday are gone; the cares of to-morrow have not yet come; the present is full of rare, and beautiful colour! Wine! Give me, I beseech you, an old bottle of choice red wine."

But, as some persons persist in supposing, far more durable and sentimentally refined is the bouquet of the purer liquor at a temperance banquet:—

"We bid you to a wineless feast,
And string our noble lyre.
Our blood is warm enough at least,
Without the vintage fire:
Affection's subtle alchemy
Repeats with touch divine
The miracle of Galilee,—
Turns water into wine!"

Respecting which miracle, as runs an Eton tradition, the single line was found written on the paper of a schoolboy (Tierney) who had failed to accomplish further verse-composition:—

"Conscia lympha Deum vidit, et erubuit."
"The modest water saw its Lord, and blushed."

"Sherry," according to Sir Wm. Roberts, "as used dietetically, frequently exercises an important retarding effect on the digestion of food in the stomach. Half-a-pint of such wine is no unusual allowance at dinner with many persons, this being in proportion to the whole meal (at an estimated total of two pounds in its quantity by weight) about 25 per cent—a very obstructive proportion! In the more common practice of taking two, or three wineglassfuls of sherry with dinner we may notice probably a double action,—both a stimulating effect on the secretion of gastric juice as well as on the muscular contractions of the stomach, and a slight retarding effect on the speed of the digestive chemical processes, especially at their early stages. In still smaller quantity (a wineglassful, or so) sherry acts as a pure stimulant to digestion; though in connection with any such

dietetic use of sherry remembrance must be held that it exercises a strong arresting effect (by its free sugar, and its acidity) on the conversion of bread, and other farinaceous foods by the saliva into dextrose. But sherry is superior to the other fortified wines as to the rapidity with which it develops the volatile ethers. Therefore it is an appropriate stimulant for benefiting certain sorts of infantile, and youthful debility, as well as nervous failure in the digestive functions of enfeebled old invalids. Sherry (*Vinum xericum*), the wine of Jerez, in Southern Spain, is commonly much manipulated. Negus (an Indian drink) is made with white wine (Sherry or Marsala), sugar, and lemon-juice, with ginger and a little nutmeg being added, whilst steaming hot water serves to complete this fragrant cordial restorative, of moderate alcoholic strength. At Jerez, Sherry is the common everyday drink of working persons, as well as of the upper classes: and their general good health, with an immunity from rheumatism, or gout, is proverbial. It is then a dry natural wine, the most refreshing and wholesome of drinks: whereas the Sherry exported to this country is sweetened, and loaded with spirit.

Elderly persons sometimes cannot fall asleep for a long time after getting into bed, and become worn out with restlessness, and with tossing about. This misfortune may generally be obviated by their taking an egg, lightly boiled, or a plain chicken sandwich, or some equally simple, yet nutritive little repast the last thing at night (supposing no previous solid meal has preceded this by at least a couple of hours), accompanied by half a tumblerful of hot wine and water, or negus, or a glass of sound, light, bitter beer. Sweet, fortified wines are specially to be chosen for this purpose, as Malaga, or Port, or Sherry. Likewise good Burgundy, warmed, spiced, diluted, and sweetened, makes an excellent night-cap. Madeira, again, another fortified wine, will exercise soporific effects either as a separate, but treacherous, potation, or when mulled (Latin *mollire*, to soften) with spices; the devotees of which wine aver that it should smack of the cockroach. At the Hop Pole Inn, Tewkesbury, where Mr. Pickwick, with Mr. Benjamin Allen, and Mr. Bob Sawyer, stopped to dine, "there was more bottled ale, more Madeira, and some Port besides, and here the case-bottle was replenished for the fourth time; under the influence of which combined stimulants Mr. Pickwick, and Mr. Ben Allen fell fast asleep for

the next thirty miles, while Bob, and Sam Weller sang duets in the dickey."

Of Champagne, the best varieties are obtained from Rheims and Epernay in France. It should be a natural wine, containing from nine to twelve per cent of alcohol; but what is now drunk in England as Champagne is mostly a brandied wine. The amount of sugar in this wine varies from *nil* up to 14 per cent. Most of the Champagnes now in vogue, even those which are high-priced, are fortified up to 12 per cent of absolute alcohol, and are unworthy of choice, or salutary drinking.

Marsala is a Sicilian wine, and sweeter than Sherry, whilst containing less of the volatile ethers which characterize the latter.

Claret, probably named from *clairet*, a thin vin ordinaire, is produced in Medoc, of which district the seaport is Bordeaux. It is a pure, natural wine containing from 8 to 13 per cent of alcohol, with a high proportion of volatile ethers. Burgundy resembles claret, but is richer in extractive matters, and is of higher alcoholic strength. Beaune and Chambertin are the wines of this kind most to be commended. Claret contains no appreciable amount of sugar. For the invalid it should be a good wine as to its choice, otherwise it cannot be genuine. The cheap Clarets are concocted of grape-spirit, colouring matters, sugared water, and some brandy, making up all together a clever imitation of the natural wine. A true Claret will not cost less than from four to five shillings a bottle; it should have a raspberry flavour, and is more astringent than Burgundy, but not with tannin, like tea. Though Claret seems to the palate more acid than Port wine, it is really not so. Any fortified wine taken after Claret would stultify its salutary effects. Louis the Fifteenth, of France, asked Richelieu about the wines of Bordeaux, and was told respecting its various vintages, the wine of Upper Burgundy being finally said to be superlative: "One can drink of this as much as one will," said Richelieu; "it puts people to sleep, and that is all." "Puts people to sleep, does it?" answered the King; "then send for a pipe of it." It is supposed that there is now too much Vin Ordinaire in France, owing to growers having abandoned "vin de luxe." One proprietor is known to be giving common wine to his horses as part of their diet. This was done likewise in 1874, and 1875, when the vine harvests were specially abundant. The horses require to become

habituated to the wine by having part of their corn steeped in it, and putting this at the bottom of the manger below other corn untreated; then the proportion of corn with wine is gradually increased until the horses come to like it. Some horses are thus led on to drink wine almost pure, and even to enjoy it. They trot very well on the strength imparted by the wine, although their ration of corn is diminished in proportion. M. Monclar has given wine to draught horses, and finds that barley, or other grain, with such wine is about as stimulating as corn. Dr. Tobias Venner, in his *Via Recta ad longam Vitam*, said at that time (1620): "There are also other French wines (would to God they were so common as Claret) which for pleasantnesse of taste, mediocrity of colour, substance, and strength, doe for most bodies (for ordinary use with meates) far excell other wines, such as are chiefly Vin de Congry and d'Hai, which to the Kings, and Peeres of France are in very familiar use. They notably comfort the stomacke, help the concoction, and distribution of the meates, and offend not the head with vaporous fumes. They are regall wines indeede, and very convenient for every season, age, and constitution, so they might be had." About a temperate use of wine Androcides was wont to say unto Alexander when being about to drink the same: "*O rex, memor sis te terræ sanguinem bibere.*"

Hungarian wines are very fine, natural wines, red and white, almost free from sugar, and of moderate alcoholic strength. Italian wines are natural, with a rather high acidity, and a moderate percentage of alcohol. Australian wines are full-bodied, containing rather more alcohol than most clarets.

The juices, fermented or unfermented, of certain fruits, or plants, prepared in imitation of wine produced from grapes, are of home manufacture as sweet wines, being sparingly alcoholic, if at all, whilst they embody, sometimes curatively, the herbal virtues of the distinguishing fruit, or other vegetable product which is the basis of the brew, such as cowslip, currant, elder, gooseberry, raspberry, rhubarb, etc.

ALE

(*See* ALCOHOL *and* BEER.)

ALE is beer of a certain strength, light in colour, being brewed from malt dried at a low degree of heat. Andrew Boorde, in 1542, distinguished ale (as made of malt, water, and nothing else)

from beer as brewed with malt, hops, and water. The hop converted our English ale into beer. But the terms ale, and beer are really synonymous now as applied to the paler malt liquors, whilst the darker drinks are porter, and stout. These latter are made in the same way as ale, or beer, but the malt is first roasted in cylinders, much as coffee berries are treated, which process has the effect of producing some caramel (or partially-burnt sugar); also by killing the fermenting principle this prevents further production of sugar in the mashing. It is probable that a tumblerful of good, brisk ale may actually help digestion by increasing the appetite, and calling out a more abundant secretion of gastric juice, with more active movements of the stomach. But malt liquors must be regarded as frequent predisposers to gout by provoking acetous fermentation in persons liable thereto.

ALKALIES IN FOODS.

The alkali, Soda (sodium), which is most necessary in the body for the proper constitution of its fluids, is derived chiefly from animal foods, this being taken in the chemical form of chloride of sodium, or common salt; whilst the alkali Potash (potassium), which is essential for the renewed construction of cells, perhaps also of the red blood corpuscles, and of the muscles, is got more abundantly from the vegetable group of foods. Green vegetables, and ripe fruits are a particularly valuable source of potash salts. A craving for table-salt as an addition to the diet specially prevails among vegetable feeders. If it be wished, by the use of alkalies, to prevent the gouty formation of uric acid sediments, as gravel, and the like, or to gradually dissolve such concretions as have already become formed in the bladder, it will certainly be more rational to prescribe a diet of fresh fruits, potatoes, and other such vegetable products than to order alkaline mineral waters, or medicines, which, if taken constantly, are likely to create all kinds of irritative disturbances in the blood.

Speaking generally, it is not to the laboratory of the chemist we should go for our potash salts, but to the laboratory of nature, and more especially to that of the vegetable kingdom. They exist in the green parts of all vegetables; but we wastefully extract a considerable proportion of these salts when we boil the vegetables, and throw away their potage, which our wiser and more thrifty French neighbours add to their everyday *menu*.

When we eat raw vegetables, as in salads, though not converting their starch elements into soluble dextrin, especially if vinegar is added, yet we obtain all their potash constituents. Fruits, taken generally, contain important quantities of potash salts; and it is upon these vegetable products that the likely victims of gouty acid formations should especially rely; lemons, and grapes contain the same most abundantly. It should not be forgotten that nearly all the chemical compounds of potash, as they exist in fruits, and vegetables, are acid. But these organic acids become disintegrated in the body by their combustion, and then leave alkaline residual bases. Far different is the case with vinegar, and the mineral acids, which are of fixed chemical composition, and remain acid throughout.

Mattieu Williams teaches, in his *Chemistry of Cookery* (1898), that the saline constituents of vegetables (which are usually boiled out in the cooking water) are absolutely necessary for the maintenance of health; without them we become the subjects of gout, rheumatism, lumbago, gravel, and all the ills which human flesh, with a lithic acid disposition, is heir to. The potash of these salts existing in the vegetables, as combined with organic acids, is separated from these acids by organic combustion, and is straightway presented as an alkali to the baneful gouty acid of the blood, and tissues, the stony particles of which it converts into harmless, soluble lithate of potass, and thus enables them to be carried out of the system by the urine, the skin, and other channels. "I know not which of the Fathers of the Church invented fast days, and *soupe maigre*, but I can almost believe he was a scientific monk, and a profound alchemist, like Basil Valentine, who, in his seekings for the "*aurum potabile*," the elixir of life, had learnt the beneficent action of organic potash salts on the blood, and therefore used the authority of the Church to enforce their frequent use in vegetable foods among the faithful." The proper compounds to be produced are those which correspond to the salts existing in the natural juices of vegetables, and in flesh, viz., compounds of potash with *organic* acids, such as tartaric acid, which forms the potash salt of the grape; such again, as citric acid, with which potash is combined in lemons and oranges; likewise malic acid, with which the same alkali is combined in apples, and many other fruits; similarly, too, the other natural acids of vegetables in general, as well as the lactic acid of milk. As long as the human body remains alive

a continuous state of slow combustion goes on within its economy, gradually, and for the most part gently, during which the organic acids of these potash salts become slowly consumed, whilst giving off their excess of carbonic acid, and water through the outlets of lungs, skin, and kidneys, but leaving behind their alkaline potash. This potash combines with the otherwise stony lithic acid (gouty material) just when, and where it begins to be harmfully formed, and neutralizes it into a soluble innocent combination. But no such happy decomposition is possible with free mineral acids in the blood, and tissues, to wit, sulphuric, nitric, or hydrochloric (if given medicinally), which are therefore poisonous to persons of a gouty, lithic acid disposition. Neither does the acid of vinegar—acetic, produced by fermentation—become changed so as to yield an alkali against gouty deposits; but, as already stated, lemons, and grapes contain the fruit salts of potash most abundantly. Persons who cannot afford to buy these fruits as daily food may use cream of tartar, which, when genuine, is the natural salt of the grape.

Again, we shamefully neglect the best of all food by failing to partake more freely of fruit when ripe and sound. If it must be had cooked, then what we have to say is, "Jam for the million, jelly for the luxurious, but fruit-juice in some form for all." The desire among boys for fruit, which sometimes tempts them to rob the orchard, is due to the craving of nature at this time of life for vegetable acids, a craving which it is needful to gratify, and wrong to deny.

The chief mineral substances necessary in food are soda, potash, lime, magnesia, and iron, together with phosphorus, chlorine, sulphur, and traces of such matters as silica, fluorine, and iodine. These constituents are of vital importance as structure-builders, and renovators. Lime and phosphorus are organically combined in milk; iron in yolk of eggs, meat, and artichokes; sulphur in all vegetable nitrogenous foods. Of dietetic articles the richest in lime is milk, next eggs, then the cereal grains, especially rice. Iron is present (as to order of richness) in spinach, yolk of egg, beef, apples, lentils, strawberries, white beans, peas, potatoes, and wheat. Milk, and its derivatives, such as cheese, are very poor in iron. Of vegetable foods, oatmeal, and Egyptian lentils are amongst the richest in iron, but bread, rice, artichokes, potatoes, and spinach also contain a good proportion.

Certain Natural Waters from volcanic regions, former, or present, are in demand as pure and refreshing drinks, because of their amount of carbonic acid gas, as well as their mineral salts. The best, and longest known is the water of Seltzers in Nassau, generally called Seltzer water, which continues to be supplied commercially in just the same state as whilst rising from this wonderful spring. It was first used in 1798. But artificial mineral waters are now much more in vogue, all of which are impregnated with carbonic acid gas made from chalk (carbonate of lime) in its ground, pulverulent form, "*whiting.*" Those waters which are distilled should be preferred, not only because they are free from organic impurities, but also because they are without any mineral salts in excess; of course, the source of the water from which these drinks are manufactured must be irreproachable as regards taint of impurity, or infection. And as to "the mineral spring fad," says Dr. Woods Hutchinson (1903), "this is one of the survivals in medicine from the times of the 'trembling of the waters' in the Pool of Bethesda. It originated unmistakably in the good old demon-theory days, when the potency of the water was rated according to the amount of heat, and effervescence from gases contained therein, and, best of all, from its sulphurous smell, and abominable taste, all of which were to the primitive mind clear and convincing proofs that such water issued directly from the infernal regions, being possessed by spirits, and hence peculiarly suitable for the casting out of devils by Beelzebub." "Thus, either sparkle, heat, or a brimstone taste is still the popular requisite for a successful mineral water; if it has all three it inspires a confidence little short of that felt by Montaigne in the waters of Corsena, which he declared 'powerful enough to break stones.'"

A bottle of soda water recovered from the wreck of the *Royal George* (1780) was sold March 10th, 1903, by public auction in London for the sum of twenty-five guineas, it being more than 120 years old. Soda water was first introduced in 1767, being called "Mephitic julep," by Mr. Richard Bewley, of Great Massingham, and it received its present name before 1798. A glass soda-water bottle was dug up on the Crimean battlefield, thus showing that no alteration in the shape had taken place for seventy-three years. Ginger-beer was at one time put into bottles similar in shape to this same soda-water pattern, but made of stone.

The effervescent table waters of commerce,—soda-water, potash-water, Seltzer-water, Apollinaris water, and the like,—are all charged more or less with alkaline carbonates, whereby they are prevented from arresting the salivary digestion, so that the use of such waters as an addition to sub-acid wines is commendable. The mineral waters, soda or potash, usually contain in each bottle from ten to fifteen grains of their respective bicarbonates, in addition to the carbonic acid gas. Seltzer-water further contains magnesium, with phosphate, and sulphate of soda. "At Bath," we are told, "in Pickwick's day, near at hand to the Pump Room, there were mineral baths in which a part of the company wash themselves, and a band plays afterwards to congratulate the remainder on their fellow-visitors having done so." Further on we read concerning these Bath mineral waters (sulphated lime): "'Have you drunk the waters, Mr. Weller?' inquired his companion, the tall footman, as they walked towards High Street. 'Once,' replied Sam. 'What did you think of 'em, Sir?' 'I thought they was particklerly unpleasant,' replied Sam. 'Ah!' said Mr. John Smawker, 'you disliked the killibeate taste, perhaps?' 'I don't know much about that 'ere,' said Sam; 'I thought they'd a werry strong flavour of warm flat-irons.' 'That is the killibeate, Mr. Weller,' observed Mr. John Smawker contemptuously. 'Well, if it is, it's a werry inexpressive word, that's all,' said Sam; 'it may be so, but I aint much in the chemical line myself, so I can't say.'"

Nowadays much may be done for the relief of functional heart disorders by taking, as a pleasant beverage at meals, Barium water, a famous spring whereof exists at Llangammarch Wells, in Breconshire. This contains more than six grains of barium per gallon. The water is likewise of especial service for curing enlarged tonsils in delicate children, with contingent irritability of the heart; also it is highly useful as a course for lessening arterial stiffness of the vascular coats. The Barium water can be had in bottles, or syphons, for table use.

About the middle of the eighteenth century, when stone in the bladder was common, and was sought to be dissolved by alkalies, soap was largely administered as such a solvent. The case of Horace Walpole marked this method in 1748, when he began to take a course consisting of one ounce of Alicant soap in three pints of lime-water daily. The same regimen was continued

by him until the beginning of the year 1757, when it was calculated that he had consumed no less than 180 pounds of soap, and 1,200 gallons of lime-water. Yet when an examination was made of his body after death by Mr. Sergeant-Surgeon Ranby, and Mr. Hawkins, three stones were found in his bladder.

It was to challenge the memory of old Macklin (who had boasted he could learn anything by rote on once hearing it), that S. Foote extemporised the following well-known nonsense-passage. "So she went into the garden to cut a cabbage-leaf to make an apple pie, and at the same time a great she-bear coming up the street pops its head into the shop. *What! no soap!* so he died, and she very imprudently married the barber; and there were present the Picaninnies, and the Joblillies, and the Garyulies, and the Grand Panjandrum himself, with the little round button at top; and they all fell to playing the game of catch as catch can till the gunpowder ran out at the heels of their boots." A (professedly) Eton boy has rendered the same in Latin hexameters :—

"Ut vice pomorum fungantur caule, placentam
Hortulum adit meditans: immani corpore at Ursa
Ora tabernæ infert—*eheu, saponis egestas!*
Hicce obiit dehinc mortem, temeraria at illæ
Omine tonsori lævo nupsit: Picalilli,
Joblillique aderant, cum Garrabulis; Panjandrum
Magnus et ipse aderat, apice insignisque pusillo:
Ludo captantes captabantur quoque, pulvis
Calce cothurnorum donec sclopetarius exit."

Professor Kirk, of Edinburgh, in *Papers on Health*, commends highly for localized neuralgia to lather the part with Barilla soap, which must be genuine (Maclinton's) as compounded from the ash of the barilla plant, growing abundantly in Sicily, in Teneriffe, and some parts of Spain. Lather made therefrom does not dry on the skin; its composition is a valuable secret. The soap requires eight days for its manufacture, and should be stamped with the name of makers—Brown & Son, Donoughmore, Tyrone, Ireland. This lather will allay the irritation of internal organs by application to the skin outside, as, for instance, over the stomach when it is rejecting all food, and even when retching on emptiness. Handful after handful of the lather (mixed in the palm with a shaving-brush, and hot water) should be laid on until the required surface is well covered; then a soft handkerchief should be put loosely over it. Again, varicose ulcers

of the legs can be successfully healed in many cases by simply dressing them with compresses of lint, or soft linen, steeped in a solution of bicarbonate of soda, containing from 2 to 4 per cent of this salt. The suppurative discharges will become straightway lessened, and healing will proceed apace.

ALMONDS.

Two sorts of almonds are available with us commercially—the sweet, or Jordan almond,—so called, it would seem, from "jardyne," because of the garden sort (chiefly from Malaga and not in any way connected with the sacred river of Syria); and the bitter almond, belonging to the same species, but possessing other volatile poisonous properties which are dangerous. The sweet almond (amygdala) is valuable as a food, and for confectionery purposes, being rich in a bland oil, and sustaining as a nutriment. The staying power conferred by a meal of which these almonds, and some raisins, form the chief part, is well known. It has been well said, "No man who can fill his pockets with almonds need starve on a journey." Persons who can readily digest these products are believed to derive from them a quickening of the intellect in magnetism, and in keenness, or argumentative force; but, if at all rancid, almonds are apt to upset delicate digestions, inducing nettlerash, and feverishness. Bitter almonds are smaller, and whilst yielding in part the same bland oil, when mixed as emulsion, contain further a powerful bitter principle known as amygdalin, which becomes identical with prussic acid, and is therefore a potent poison. The volatile, bitter oil which embodies this poison is obtained from the residual almond cake after the bland oil has been first expressed. When eaten in substance the bitter almond is strongly harmful, and its distilled water will cause giddiness, headache, dimness of sight, vomiting, and occasionally convulsions, such as of epilepsy. An essence of bitter almonds (ratafia) is made by mixing two fluid drachms of the volatile oil with six fluid drachms of alcohol. Sweet almonds roasted to the colour of amber are delicious to eat with biscuits, or with bread and butter; they contain 24 per cent of vegetable nitrogen (proteid), 54 per cent of fat, 10 per cent of starch material, 3 per cent of salts, 3 per cent of extractives, and 6 per cent of water.

As an eligible piece of confectionery which is light, sustaining,

and somewhat sedative to an irritable, or qualmish stomach, the macaroon ("*maccare*," to reduce to pulp) is admirable, either at breakfast (instead of the customary egg, including the yolk), or by way of an improvised luncheon, or as an occasional snack, about the easy digestion of which no fear need be entertained. The albuminous white of egg, the demulcent, reinvigorating sweet almond, the comforting sugar, and the tranquillising modicum of bitter almond, with its infinitesimal quantity of prussic acid as a sedative to the gastric nerves, make altogether a most happy combination for the objects now particularized.

In the dietetic treatment of diabetes sweet almonds may be employed for making a kind of bread without starch in it, this being a tolerable substitute for wheaten bread, which is prohibited because of its starch, convertible into sugar. For this purpose the sweet almonds are first blanched, then expressed strongly together so that a portion of their oil may be squeezed out; they are next treated with boiling water in which some tartaric acid has been dissolved for expelling the sugar; and finally they are ground into a powder, which can be used for making bread, or for cakes, and puddings, when combined with eggs, and cream. *Almond drink* is softening and nutritive in chest affections, being easily prepared by rubbing up a couple of ounces of the compound powder of almonds with a pint of water. This is serviceable in fever, and other acute diseases. Again, Almond soup is a nourishing dish for a delicate stomach disposed to nausea. A quarter of a pound of Jordan almonds, and five bitter almonds, are to be blanched, peeled, and pounded, with half-a-pint of milk added during the process, and a pint of milk afterwards; then warm the mixture, and pour it over a pint and a half of rice milk, also made hot; mix both these together, when hot enough, in a tureen.

It may be that the so-called Jordan almonds have derived their name from the "Jordan," an old English vessel (of clay), in shape like a modern soda-water bottle, which was formerly made use of by physicians. Most persons suppose, unthinkingly, that these almonds (which arrive here about Christmas time with other dried fruits) come from the neighbourhood of the river Jordan in Palestine; but it is better known that they derive their distinctive name from an enterprising Englishman of that title who planted, and reared them first at Malaga. They

embody much nitrogenous food (vegetable meat) in a compact form, together with a nice palatable oil, whilst free from starch, or sugar; they are therefore largely employed in making diabetic foods. From these sweet almonds a milky drink can be prepared which will soothe, and pacify troublesome bronchial coughs. The bitter almond contains in 100 parts, 28 of fixed oil, 30 of albumin, 6 of sugar, and 19 of essential oil, including its prussic acid. This almond, when rubbed up with water, has the odour of fresh peach blossom, with the pleasant, bitter taste of peach kernels. Prepared from it sparingly by the cook are macaroon biscuits, smaller ratafia biscuits, and the French *sirop d'orgeat*, which severally supply prussic acid in a safely modified form, excellent against nausea, and the sickness of nervous indigestion.

Far back in 1610 John Taylor, the water-poet, wrote: "Let anything come in the shape of fodder, or eating stuffe, it is welcome, whether it be sawsedge, or cheese-cakes, or *makroone-kickshaw*, or tartaplin." For making macaroons, according to an old Dutch recipe: "Take one pound of sweet almonds, blanched and pounded, together with a tablespoonful of fresh rose-water, and one pound of white sugar; melt the sugar, and almonds over the fire until quite a tough jelly; then have ready the whites of four eggs beaten to a froth; whip them together when cold. This way of melting the sugar and almonds is excellent, as it prevents the macaroons from running together in the tins. Three or four bitter almonds, according to taste, may be included among the sweet almonds now ordered. The old-fashioned plan was to put a small piece of candied citron on each macaroon biscuit. Dust some fine cinnamon over before baking."

At Miss Barker's (the ex-milliner) evening party given to the select ladies of "Cranford" (Mrs. Gaskell) there were "all sorts of good things provided unexpectedly for supper,—scalloped oysters, potted lobsters, jelly, a dish called '*little Cupids*' (which was in great favour with the Cranford ladies, although too expensive to be provided except on solemn, and state occasions; macaroons sopped in brandy I should have called it if I had not known its more refined, and classical name). In short, we were evidently to be feasted with all that was sweetest and best; and we thought it better to submit graciously, even at the cost of our gentility,—which never

ate suppers in general, but which was particularly hungry on all special occasions."

Again, Charles Lamb, when in lodgings with Mary Lamb, up two pairs of stairs in East Street, at Miss Benjay's, rejoiced in " tea, coffee, and macaroons (a kind of cake), and much love."

Salted almonds make a nourishing side dish at luncheon, or for dessert. Blanch a quarter of a pound of Jordan almonds, fry them in an ounce and a half of butter, and when fried a nice golden brown, drain them on paper, and then roll them in salt dusted with red pepper.

Likewise, for serving to dispel nausea (except from obnoxious undigested food) an admirable confection which is delicious to the palate, and which is to be had from most pastrycooks under the name of " apricotine," answers promptly, being at the same time an acceptable sweetmeat. Small, round sponge cakes are made, within which some almond paste is put, with a thin layer of apricot jam superimposed, whilst white powdered sugar is dusted over the cakes.

Ratafia biscuits are composed mainly of bitter almonds, and are smaller in size than macaroons. As ingredients, take half a pound of sweet almonds (blanched, and pounded), with the white of an egg, a quarter of a pound of bitter almonds, three-quarters of a pound of sifted sugar, and the whites of four eggs (whisked); bake for ten minutes.

In Sterne's *Tristram Shandy*, vol. vii, occurs a tenderly humorous piece of delicate writing which bears reference to the macaroon: " 'Twas a poor ass who had just turned in (at Lyons) with a couple of large panniers on his back to collect eleemosynary turnip-tops, and cabbage-leaves, and stood dubious with its two fore feet on the inside of the threshold, and with its two hinder feet towards the street. He was eating the stem of an artichoke as I held discourse with him, and, in the little peevish contentions between hunger, and unsavouriness, had dropped it out of his mouth half-a-dozen times, and picked it up again. 'God help thee, Jack!' said I; 'thou hast a bitter breakfast on't, and many a bitter day's labour, and many a bitter blow, I fear. And now thy mouth, if one knew the truth of it, is as bitter, I daresay, as soot (for he had cast aside the stem), and thou hast not a friend perhaps in all this world that will give thee *a macaroon*.' In saying which I pulled out a paper of 'em which I had just purchased, and gave him one; and at this moment

that I am telling of it my heart smites me that there was more of pleasantry in the conceit of seeing how an ass would eat a macaroon than of benevolence in giving him one, which presided in the act." Well might Thackeray say of this passage, "The critic who refuses to see in it wit, humour, pathos, a kind nature speaking, and a real sentiment, must be hard indeed to move, and to please."

A nourishing dish for a child, or invalid, is good bread-sauce to which has been added two ounces of ground almonds well pounded in a mortar. It may be served with spinach if approved. Baked almonds lightly salted, and ground, make excellent sandwiches. Whether taken thus, or in a simpler form, they should always be previously blanched, as their brown skin is possessed of irritating properties The sweet almond oil is used in making "Rowland's macassar." The French "orgeat," or "orgeade,' is a syrup made chiefly from sweet almonds.

ANGELICA.

THE candied stems of this aromatic English herb, as sold commonly by our confectioners, are of excellent service to relieve the flatulence of weakly digestion. They smell pleasantly of musk, being a capital tonic, and carminative. Furthermore they are antiseptic. It was said in the *Speculum Mundi* (1643):

> "Contagious aire ingendering pestilence.
> Infects not those, who in their mouths have taine
> Angelica, that happy counterbane."

The herb is known as Masterwort, or more popularly, "Jack Jump-about," also as Lingwort. It is grown abundantly near London, and may be cultivated in our gardens. Its peculiar resin, "angelicin," is stimulating also to the lungs, and the skin, especially for aged, and feeble persons with bronchial catarrh. Some writers have said this plant—the *Archangelica*—was revealed in a dream by an angel to cure the plague; others aver that it blooms on the day dedicated to Michael the Archangel (May 8th, old style), and is therefore a preservative against evil spirits, and witchcraft. Angelica taken somewhat freely as a sweetmeat will cause a distaste for alcoholic liquors.

ANIMAL FOODS.

A DISTINCTION is to be made between animal foods, and flesh foods, which latter do not include milk, cheese, butter, or eggs,

(each of which will be considered here under its proper heading). As to animal foods, when compared with those of a vegetable nature, it is to be noticed that while plants build up their contained nutriment by increase of growth, and by materials constantly added, animal flesh is always on the downward grade, by wear and tear of consumed tissue, and muscle, etc. Thus it happens that the flesh of animal bodies, when taken by us as food, still contains broken-down products such as were being perpetually excreted through the animal's skin, kidneys, intestines, lungs, and other emunctory outlets of its body. Therefore it cannot but happen that we eat some of these waste products, modified though they become by proper cooking, otherwise they are liable to provoke poisonous toxication of the blood, and to cause the retention therein of fermentative noxious elements. "Flesh foods," says Kellog, "of the animals we consume contain poisonous substances resulting from force-expending processes, such as brain, and nerve activity, and muscle activity, including that of the heart, and glands. In fact, every vital process carried on in the animal's body produces poisonous material, to be thrown off by this or that extricatory channel. In the flesh of the healthiest animal there is always present a large, or small amount of broken-down products, which are on their way out of its body, to be removed by the liver, the kidneys, the skin, and other organs." But the plant, as far as we know, has no such waste products; neither does milk comprehend them.

The principal nutritive constituent of flesh meat is "proteid," this being characterised by the rapidity with which it can become disintegrated as to its cells, with the liberation of heat; in other words it is a quick fuel. "It is to such proteid that meat owes its heating qualities, as commonly ascribed; for which reason its use should be restricted in summer-time." "Again," says Clouston, "the presence of much meat in the diet seems to act as an excitant of the animal passions, such 'flesh' being the incarnation of rampant, uncontrollable force." Moreover, we have to remember that the fundamental principle of our daily urine is urea, a waste product of the muscles and other bodily structures, which we are constantly expending in our daily life, whilst exactly the same conditions obtain with the animals whose flesh we eat. It will therefore be anxiously asked, Is the uric acid still in the meat when it comes to table? Yes, certainly! These waste "extractives of meat," as Dr. Hutchison calls them, "have no nutritive

value, but they are the chief cause of the characteristic taste of meat. Whether or not they exercise bad effects, or the same effects which the like poisons cause when becoming formed in our own bodies, science does not say." "Together with the uric acid are found other poisons, e.g., creatin, creatinin, etc.; so that the flesh diet makes the excretions twice as poisonous from animals, as are the excretions of a person who lives on fleshless diet." "It is admitted." writes Dr. Haig, "that disease germs will grow with the greatest rapidity in beef-tea, and other preparations of animal tissue; whereas fruit juices will often actually destroy these germs."

When an animal is slaughtered for food, its tissues and cells before they are all completely dead still go on consuming the soluble food-elements which surround them, and they yet produce various chemical combinations just as during life; that is to say, they go on working, and giving off waste matters for a time after death. But no longer can the body remove these corrupt waste products through its several outlets; they accumulate as poisons after the animals' death, and tend to spoil the flesh, being no more washed away by a circulating stream of pure blood; and we can readily imagine how much worse the effect is when the carcase of the animal has been kept for several days before reaching the kitchen. "Concerning the eating of animals," says the *Buddhist Ray*, a Hindoo journal, "In the mechanical arts the meat-eating nations of the West surpass, as to skill and ingenuity, the vegetarian nations of the East. Still, this does not make them healthier or happier. The vices, and diseases of the Western carnivorous nations have, within the century recently ended, been the means of the extinction of whole races. On the diet of animal flesh they will never realise the 'peace and goodwill among men' spoken of in the Christian Scriptures. The dream of a pearly-gated, peaceful, New Jerusalem on a carnivorous diet, is the delusory chimera of a fool, or a visionary."

Of animal foods, the most rapidly digested are those of soft consistence, such as sweetbread, and the like. The white meats, chicken, etc., are more digestible than the dark meats, for instance, the duck, or pigeon, or even the red meats; but their method of cooking greatly influences the result. Fresh fish is more rapidly digested than meat. Cauliflower is the most speedily digested of all vegetables.

It is remarkable with respect to the infirmity of stammering

in speech, that several leading German physicians now maintain the opinion that a diminution in the amount of meat that is eaten should be insisted on with a view to lessening these difficulties of utterance; three weeks of abstinence from meat are said to marvellously improve a stammering sufferer. Again, in the strange case of Dr. Jekyll, and Mr. Hyde, as told by Robert Louis Stevenson, 1896, it is related how the former personage discovered by researches in the laboratory that man's nature is not truly that of a unit, but dual,—animal, and intellectual,—and that by a certain compound drug, or tincture, containing various salts corresponding to meat extractives, the two natures could be separated, the animal Hyde being set free to follow his unrestrained brutal indulgences. Other drugs could restore the former double nature in one, but the oftener the separation was practised the greater ascendancy did the low vicious animal nature acquire, until at length it got to possess the man altogether, body and soul. And in this way the moral, and intellectual redeeming moiety was utterly extinguished, so that the monster Edward Hyde completely overpowered the good, benevolent Dr. Jekyll, and presently came to a miserable end by suicide, that he might escape from the Nemesis of the law for the heinous crimes perpetrated through his flesh-eating propensities.

The people who consume the greatest quantity of meat are the Americans, their average individual amount being one hundred and seventy-five pounds per annum. The English come next with an average of rather more than one hundred and ten pounds. The French people eat only half as much meat as the English; and the people of Germany, Italy, and Austria still less.

Long experience by English, Scotch, and Irish labourers has proved cheese to be a capital substitute for meat in affording satisfactory nourishment. A small quantity of sound cheese with them takes the place of a large allowance of meat, and enables them to endure such hard labour as the American thinks he can only perform upon a generous meat diet. In Germany farm labourers depend largely upon the curd of milk, after skimming this milk for butter. Such curd is often used in a fresh state, and makes an important part of the labourers diet. Cheese is less liable to putrefactive change than flesh, and thus much less likely to develop in the human system those scrofulous diseases which are attributable to animal food, more or less diseased, if the truth were known.

The person who eats in excess, especially of animal food, is always too easily fatigued; even a single meal may produce fatigue, if it is unusually large, or rich. Workmen are sooner tired on a Monday compared with any other day of the week, owing to their having more (animal) food, and less work on the Sunday preceding. The said fatigue is then due to self-poisoning, or auto-intoxication by corrupt products from a surfeited digestion. And on this principle it happens that the staying power of vegetarian eaters is so much greater than that of those who consume meat, when competing, for instance, in walking matches over long distances.

Nevertheless a generous diet in the respect of animal food is generally essential towards the cure of hysteria, where the nervous system is always impoverished. As regards the making, and repair of bodily tissues, these effects can be accomplished only by proteids, with mineral matters, and water. Besides the lean of flesh these proteids include white of egg, the casein of milk, the gluten of grains, and gelatin, with fibrin, as parts of meat. They as proteids are alone able to fulfil both functions as a food, viz., tissue-making, and the maintenance of bodily warmth. Hence is given to them the pre-eminent name, *proteids*. "We may go without fats, but unless we have proteids we die." Vegetable proteid is not so readily assimilable as that of flesh meat. "Many of the failures of haphazard vegetarianism are due to a lack of sufficient proteids in the diet." Nitrogen enters the body in proteid, and leaves it in urea, the product of expended muscular force. Carbon enters the body in fat, and leaves it in carbonic dioxide, the product of combustion within the body.

Sir Thomas Browne, in his *Religio Medici*, 1635, has discoursed after the following manner about our eating of meat. "Now for these walls of flesh wherein the soul doth seem to be immured before the Resurrection, it is nothing but an elemental composition, and a fabric that must fall to ashes. *All flesh is grass* is not only metaphorically, but literally true; for all those creatures we behold are but the herbs of the field, digested into flesh in them, or more remotely carnified in ourselves. Nay, further, we are what we all abhor, *anthropophagi*, and cannibals, devourers not only of men, but of ourselves; and that not in an allegory, but a positive truth, for all this mass of flesh which

we behold came in at our mouths, this frame we look upon hath been upon our trenchers ; in brief we have devoured ourselves ! "

Within quite recent times the medical practice has come deservedly into vogue, of curing diseased states due to faulty function of some particular organ (glandular for the most part) in the human subject, by giving as food, or as an extract, portions of the same organ whilst in sound health, taken from a freshly-slaughtered animal. Thus goitre of the throat, and the depraved state of system induced thereby, are corrected, and the patient restored to full health, by administering the neck gland (or its extract)—" thyroid "—of a healthy sheep. Similarly for the urinary difficulties of old men, because of the gland (prostate) at the neck of the bladder having become thickened with senile deposits, the chopped prostate gland of a newly-slaughtered bull is given from day to day in small quantities with the most marked benefit. Likewise other such cures are being effected by giving for their allied diseases the glands, or their prepared extracts, of kidney, liver, breast, ovary, etc. Again, an animal extract is being got from the (blind) gland which caps the kidney of sheep or ox, and which corresponds to the same gland in the human body. This extract (adrenalin) has the power to stay bleeding by making the blood-vessels concerned therein contract, and close themselves up, even when cut by the surgeon's knife. But it is of difficult production, seeing that each animal gland of this nature (supra-renal) can only furnish a quarter of a grain. Also the gastric juice secreted by a healthy animal's stomach, as of the pig, or calf, will by its pepsin externally, when dried, cleanse, and serve to heal wounds, and sores complicated by sloughing, the pepsin, which acts only on dead tissues, faithfully seeking out, and breaking up the débris of disorganised cellular structure. The sores must be washed thoroughly from time to time. and a fresh solution of pepsin again applied. Similarly, for chronic urethral soreness, with bladder complications, and disorganized products given off within the urinary passages, the injection of pepsin, or bougies made therefrom, and passed along, have been found eminently successful.

Curative preparations of healthy animal organs exercise this remedial action within the human body under disease, in one of two ways, intrinsic, or extrinsic ; the former when they replace some necessary secretion which is wanting in the patient ; the

latter when not glandular, but identical in structure with the part at fault, so as in some remarkable manner to influence such part for good; as for example by giving animal heart-substance for failure of power in the human heart, or spinal marrow from the ox for weakness of the human spine. *Cardin* is the medicinal principle of the bullock's heart, and is contained therein when this is sent to table as food, being found to increase the force, and fulness of the pulse subsequently to eating it. Dr. Hutchison speaks of the animal heart as an excellent, and economical food, to be highly commended for healthy persons, and of which a larger use than at present may be well made. It resembles ordinary meat very closely as far as chemical composition is concerned, (whilst plus the *cardin*,) but differs from it in being of a denser structure. Likewise with respect to the human brain when disordered in function, it is found that sheeps' brains, by the "cerebrin" of their grey matter, when administered as food act beneficially. Again, the discovery recently made that a local application within the human nostrils of the said animal organ attached to the sheep's kidney (supra-renal), when dried and powdered, will straightway relieve the distress of hay fever, is remarkable and to the point. This animal substance if blown into, and up the nose exercises a positive remedial effect on the severe nasal trouble. Whether or not the same animal organ if given as food would answer equally well, remains to be tried. Furthermore, proof positive has been obtained that if an animal serum, which can dissolve the red corpuscles of the human blood, is injected by small doses into the human body under the skin, it will positively increase the number of sound healthy red corpuscles possessed by the individual. Likewise other serums, or soups, prepared from healthy animals (as of the liver, kidney, or spermatic fluid) and employed in small quantities, will actually strengthen the specific tissue elements of this, or that same human organ, when weakened by illness, or disease.

ANISETTE, OR ANISEED.

THIS is a cordial liqueur, prepared from the condimentary seeds of the herb Anise, which are commonly kept among the pantry stores of a well-ordered household. The said seeds (of the *Pimpinella anisum*) when distilled with water, yield a valuable fragrant syrupy oil, which separates when cold into two portions, a light

volatile oil, and a solid camphor called "anethol." The oil, being mixed with spirit of wine as an essence, or the liqueur anisette from the liqueur case, has a specially beneficial action on the bronchial tubes to encourage expectoration, particularly with children. For infantile catarrh, after its first feverish stage is over, aniseed tea is very helpful. It should be made by pouring half a pint of boiling water on two teaspoonfuls of the seeds, first bruised in a mortar, and is to be taken (when sufficiently sweetened) cold, in doses of one, two, or three teaspoonfuls according to the age of the child, with repetitions as needed. Gerarde teaches that Aniseed "helpeth the yeoxing, or hicket (hiccough), and should be given to young children to eat which are like to have the falling sickness, or to such as have it by patrimony, or succession."

Again, for spasmodic asthma, anisette is, if administered in hot water, an immediate palliative. The Germans have an almost superstitious belief in the medicinal virtues of Aniseed, and all their ordinary household bread is plentifully besprinkled with the whole seeds. The mustaceæ, or spiced cakes of the Romans, introduced at the end of a rich feast so as to prevent indigestion, consisted of meal with anise, and other such aromatics, as used for staying putrescence or sour fermentation within the intestines. Such a cake was formerly brought in at the close of a marriage banquet; and hence the bride cake of modern times has taken its origin, though now its rich, heavy composition is rather apt to produce indigestion than to prevent this trouble. An old Latin epithet of the herb Anise was "*solamen intestinorum*," —comforter of the bowels.

In the city of Naples, "long before dawn, and whilst unseen by the most active of visitors, comes up and down into the poorer streets a tattered fellow blowing a shrill whistle. 'O Caffé!' he shouts as he tramps from cellar to garret of the lofty houses, rousing the sleepy people to their work, and setting down at their doors the comfortable drink which fortifies them for the day. He carries a small bottle of Aniseed, and pours a drop or two into every cup."

For the restlessness of lagging digestion at night, a cup of Aniseed tea made by pouring boiling water on the bruised seeds (tied in a small bit of muslin) and sweetening the infusion, is much to be commended at bedtime. Besides containing the volatile oil, Anise yields phosphates, malates, gum, and a resin.

"Let me tell you this," says a practical writer of to-day: "If you are suffering from attacks of bronchial asthma, just send for a bottle of the liqueur called Anisette, and take a dram of it with a little hot water; you will find it an immediate palliative; you will cease barking like Cerberus; you will be soothed, and go to sleep. I have been bronchitic, and asthmatic for twenty years, and have never known an alleviative so immediately efficacious as anisette." Furthermore, its exquisite flavour will give a most grateful warmth, and aroma, to cold water on a hot summer's day.

Similar to the Anise plant for its fragrant aromatic virtues is the herb Dill (*Anethum graveolens*), cultivated commonly in our kitchen gardens for condimentary, and medicinal uses. It is an umbelliferous herb, bearing fruit which furnishes "anethol," a volatile empyreumatic oil like that of Anise, and Caraway. This pungent essential oil consists of a hydrocarbon, "carvene," together with an oxygenated oil. It is a "gallant expeller of the wind, and provoker of the terms." "Limbs that are swollen and cold, if rubbed with the oil o' dill are much eased, if not cured thereby." The name Dill is derived from a Saxon verb *dilla*, to lull, because of its tranquillising properties, and its soothing children to sleep. The cordial water distilled from this stomach-comforting herb is well known to every fond mother, and monthly nurse, as a sovereign remedy for flatulence in the infant. The Dill plant is grown extensively in India, where the seeds are put to various culinary purposes; their oil has a lemon-like odour, which is much esteemed. Gerarde says: "Dill stayeth the yeox, or hicquet, as Dioscorides has taught." Of the distilled water, sweetened, one or two teaspoonfuls may be given to a baby, in diluted milk, or with the bottle food.

APPLE.

THE Apple in its composition consists of vegetable fibre, albumin, sugar, gum, chlorophyll, malic acid, earthy lime salts, and much water. German food-chemists teach that this fruit contains phosphates more abundantly than any other edible garden product. Apples also afford "lecithin," a phosphorated compound derived chemically from glyco-phosphoric acid. The juice of Apples (when no cane sugar is taken with them) becomes converted within the body into alkaline carbonates, and will

neutralize acid products of indigestion, or gout. The common source of the term Apple in all its forms has been attributed to the Latin "*Abella*," a town in Campania, where fruit trees abound, and which is therefore styled "*malifera*," or *apple-bearing*, by Virgil.

The acids of Apples (malic and tartaric) are of signal use for men of sedentary habits whose livers are torpid; they serve to eliminate from the body noxious matters which would, if retained, make the brain heavy and dull, or would produce jaundice, or perhaps eruptions on the skin. Some such an experience has led to our taking Apple-sauce with roast pork, roast goose, and similar rich dishes. Two or three Apples eaten at night, either baked, or raw, or taken with breakfast, are useful against constipation. "They do easily and speedily pass through the belly; therefore they do mollify the belly." A dish of stewed Apples eaten three times daily has worked wonders in cases of confirmed drunkenness, giving the person eventually an absolute distaste for alcohol, in whatever form. A certain aromatic principle is possessed by the Apple on which its particular flavour depends, this being a fragrant essential oil, the "valerianate of amyl," which occurs in a small but appreciable quantity. The analysis of cider (fermented apple-juice) shows the presence therein of salicylic acid, formalin, malic acid, and other chemical constituents.

The digestion of a ripe, raw Apple occupies only eighty-five minutes, whilst the malic acid of such fruit, cooked, or raw, will help to digest meat in the stomach, as likewise the casein of sound cheese. "Bearing in mind our first Mother Eve, and the forbidden fruit as the beginning of all our mortal woes, the apple, according to the law of similars, ought homœopathically to be the cure for original sin" (Mark Guy Pearse).

Sour Apples should be chosen for cooking, and must not be sliced too thin, else the juice runs out, and they become tough. In not a few cases the dried apple-rings of to-day have been deprived beforehand of their fresh juices by immersion in a water-bath after paring, coring, and slicing the fruit. These juices are made into independent Apple jelly; and the "snitz," or pulp, into the evaporated "apple rings." In Jane Austen's novel, *Emma* (1816), we learn that it was customary then, as a social English refection, to serve baked Apples during afternoon calls by visitors in the country. "Dear Jane," said

Miss Bates, "makes such a shocking breakfast, but about the middle of the day she gets hungry, and there is nothing she likes so well as these baked Apples, and they are extremely wholesome, for I took the opportunity the other day to ask Dr. Perry; and when I brought out the baked Apples the other afternoon, and hoped our friends would be so obliging as to take some, 'Oh,' said Mr. Churchill, 'there is nothing in the way of fruit half so good; and these are the finest-looking home-baked Apples I ever saw in my life.' 'Indeed, they are very delightful Apples,' was the reply, 'only we do not have them baked more than twice, but Mr. Woodhouse made us promise to have them baked three times."

Biffins are Apples peculiar to Norfolk, being so called from their close resemblance in colour to raw beef. Dickens, in his charming little story, *Boots at the "Holly Tree Inn,"* tells that when Mrs. Harry Walmers, junior, was overcome with fatigue, the restorative which Boots was desired to procure was a Norfolk biffin. "I think a Norfolk biffin would rouse her, Cobbs," said Master Harry. This particular fruit was formerly dried in the oven until shrunk up, and leathery. When cooked it was stewed in syrup, until soft, and of its original size, being esteemed as a delicacy by the youngsters when they came down to dessert. In France, be it noted, these biffins are called "*Pommes bonne femme.*"

Apples, when stored in a room, absorb oxygen from the air, and give off carbonic acid gas, so that after a while the atmosphere of this room would extinguish a lighted candle brought into it, as likewise the life of a small animal. But such an atmosphere tends to preserve the fruit, because decay is arrested through the deficiency of oxygen; therefore an apple-room should be air-tight. "The rotten apple," says a suggestive old proverb, "injures its neighbours." Again, Shakespeare has told us in *Henry V:* "Faith, as you say, there's small choice in rotten apples." In *The Life of Samuel Johnson* it is related that the direction of his untutored studies was determined at sixteen or seventeen, by finding in his father's bookseller's shop at Lichfield a folio of Petrarch on a shelf, where he was looking for apples.

The juices of Apples become matured and lose their rawness by keeping the fruit a certain time. These juices (as likewise those of the pear, the peach, the plum, and other such fruits), when taken without any addition of cane sugar, diminish acidity

in the stomach rather than provoke it, becoming converted chemically into alkaline products which correct sour fermentation. A poultice made of rotten Apples is commonly used in Lincolnshire for relieving weak, or rheumatic eyes. Likewise in Paris an Apple poultice is employed for inflamed eyes, the Apple being roasted, and its soft pulp applied over the eyes without any intervening substance. "The paring of an Apple cut somewhat thick, and the inside of which is laid to hot, burning, or running eyes at night when the party goes to bed, and is tied, or bound to the same, doth help the trouble very speedily, and contrary to expectation; an excellent secret." A French physician has lately discovered that the bacillus of typhoid fever cannot live beyond a very short time in apple-juice; and he therefore advises persons who reside where the drinking water is not above suspicion to mix cider therewith before imbibing it. Francatelli gives as a recipe for apple-water, to be drunk during fever: "Slice up thinly three or four Apples without peeling them, and boil these in a very clean saucepan with a quart of water, and a little sugar, until the slices of apple become soft; then strain the apple-water through a piece of muslin into a jug, and give it cold to the patient. If desired, a small cutting of the yellow rind from a lemon may be added, just enough to give the drink a flavour." Again, for baked-apple water: "Wash three large Apples, and bake them (unpeeled) until quite soft; then pour over them a pint of boiling water, stir well, and sweeten to taste; strain afterwards when cold. This makes an excellent refreshing drink." Likewise a sour Apple cut up, and boiled until soft produces an excellent tea to abate thirst. For apple soup, "take half a pound of Apples, peeled and cored, and one pint of water, with two teaspoonfuls of cornflour, one and a half tablespoonfuls of moist sugar, one saltspoonful of powdered cinnamon, and some salt to taste. Stew the apple in the water until it is very soft; then mix together into a smooth paste the cornflour, sugar, cinnamon, and salt, with a little cold water; pour this in with the apple, and boil all for five minutes; strain into a soup tureen, and keep it hot until ready to serve. It may be eaten with sippets of toast."

The Apple is curative in chronic dysentery, whilst from the bark of the stem, and the root of the Apple tree (as likewise of the peach, and plum trees), a glucoside is to be obtained in small crystals which possesses the peculiar property of inducing

artificial diabetes in animals to whom it is given; wherefore this same glucoside is to be commended remedially in human diabetes when coming on from spontaneous causes.

A nice way of cooking Apples, as practised at the Cape, is to "wipe the apples, but do not peel them; core, quarter, and cut into slices. Have ready some syrup (made in the proportion of one pound of sugar to a pint of water) boiled quickly for five minutes, using either moist, or crystallized sugar; throw the apples into the boiling syrup, and boil rapidly for one hour, stirring frequently. The juice should then be clear, and jellied, and stiff, since the watery parts have been driven off in steam by the rapid boiling. Allow one pound of sugar to six fair-sized apples. Cloves, cinnamon, or lemon-peel may be added according to taste."

The love of Apple pie is as strong in New as in old England, folks being partial in the former to a combination of cheese therewith. S. T. Coleridge is reported to have said that a man could not have a pure mind who refused to eat Apple dumplings. "Thy breath," exclaims a swain of the Elizabethan times to his lady-love, "is like the steame of apple pyes." Sydney Smith, when writing to Lady Holland, September, 1829, tells concerning Mr. Lutrell: "He came over for a day, from whence I know not, but I thought not from good pastures; at least he had not his usual soup and pattie look; there was a forced smile upon his countenance which seemed to indicate plain roast, and boiled, and a sort of apple-pudding depression, as if he had been staying with a clergyman."

For a meal to satisfy hunger when the supplies are short, many prescriptions have been given, from Franklin's famous mess of gruel with bread crumbled into it, so as to amplify the food, and make it filling at the price, down to the "cheap living" recipe of an American writer, who has advised his readers to "first eat two cents worth of dried Apples, and afterwards drink a quart of water to swell them out as a bellyful."

Pippins are Apples which have been raised from pips. Concerning Lincolnshire pippins, wrote Fuller in his *Book of Worthies* (1642): "With these we will close the stomach of the reader, being concluded most cordial by physicians. Some conceive them not above a hundred years seniority in England. However, they thrive best, and prove best in this county of Lincoln, and particularly about Kirton, whence they have acquired

the addition of 'Kirton pippins,' a wholesome, and delicious apple."

A Codling is an Apple which needs to be "coddled," stewed, or lightly boiled, being yet sour, and unfit for eating whilst raw. The Squab pie, famous in Cornwall, contains Apples, and onions allied with mutton.

"Of wheaten walls erect your paste,
Let the round mass extend its breast:
Next slice your apples picked so fresh;
Let the fat sheep supply its flesh;
Then, add an onion's pungent juice—
A sprinkling—be not too profuse!
Well mixt these nice ingredients, sure,
May gratify an epicure."

For Apple-cake, peel, and slice thinly six pounds of good baking apples; dissolve four pounds of lump sugar in a pint of water; add the apples, flavoured with lemon-peel and cloves, and boil for one hour. Put into moulds, and keep in a cool, dry place. They will remain good for a long time. Some cooks ornament with split bleached almonds, and call this "apple hedgehog."

"Long while, for ages unimproved we stood,
And Apply Pye was still but homely food,
When God-like Edgar of the Saxon Line,
Polite of Taste, and Studious to refine,
In the Dessert Perfumery Quinces cast,
And perfected with Cream, the rich repast.
Hence we proceed the outward parts to trim,
With crinkum cranks adorn the polished brim,
And each fresh Pye the pleased spectator greets
With Virgin Fancies, and with New Conceits."

Art of Cookery 1709.

An apple and apricot pudding gives the best flavoured preparation of apples that is made, particularly when Grey Russets, or Wellingtons are used. This pudding is provided with a suet crust, and is carefully boiled.

In America "Apple slump" is a pie consisting of Apples, molasses, and bread crumbs, baked in an earthen pan. This is known to New Englanders as "Pan dowdy," a very popular dish in some parts of Canada. It is made there in a deep earthen baking dish which has been liberally buttered all over the inside, and then lined with slices of scones well buttered, and sprinkled with nutmeg and cinnamon. Some good-sized apples are peeled, cored, and shred, with which the dish is to be filled,

adding half a cup of water poured in, also a cupful of brown sugar, and two tablespoonfuls of molasses. The dish is then finished off with a crust of sliced scones, and covered over by a plate, to be baked in a slow oven for one and a half hours. When done, the "Pan dowdy" is turned out, and served with sweet sauce, or cream, if appropriate. This is an excellent form of food for growing children in cold weather.

The botanical name of an apple tree is *Pyrus malus*, of which schoolboys are wont to make ingenious uses by playing on the latter word :—

"Malo, I had rather be,
Malo, in an apple-tree,
Malo, than a wicked man,
Malo, in adversity.

Or, again, "*Mea mater mala est sus*," which bears as its most literal translation, "My mother is a depraved old sow," but the intentional reading of which signifies, "Run, mother! the sow is eating our apples." The term "Adam's apple," which is applied to the most prominent part in front of a person's neck, is based on the superstition that a piece of the forbidden fruit stuck in Adam's throat, and caused this lump to remain. When Sam Weller, in *Pickwick*, had to affix his signature to a couple of legal instruments at the Bank of England for proving his mother-in-law's will, this undertaking, "from Mr. Weller's habit of printing, was a work of so much labour and time that the officiating clerk peeled, and ate three Ribstone pippins while it was performing." "There was concocted in Gerard's day an ointment with the pulpe of apples, and swines' grease, and rose-water, which was used to beautifie the face, and to take away the roughnesse of the skin, and which was called in the shops 'pomatum,' from the apples, 'poma' whereof it was prepared." Figuratively the "apples of Sodom" signify something which disappoint one's hopes, or frustrate one's desires. They symbolize a fruit which was formerly reputed to grow on, or near the site of the Biblical city, Sodom. It was, as described by Josephus, and other writers, externally of fair appearance, but turning to smoke and ashes when plucked.

Among the Thebans of old the apple was held sacred to Hercules. They were long accustomed to offer a sheep annually on the altar of this deity, but upon one occasion, because of the river being swollen with heavy rains, they could not convey

the sheep across it for such a purpose. Therefore, knowing the Greek word "*meelon*" to signify both a sheep and an apple, they substituted the latter, having stuck wooden pegs in its under surface to represent the sheep's legs; and this fruit they dedicated to the god always afterwards.

Very pathetic are the verses of Christopher Cranch (1880) in *Busy, Crowded New York City*, touching

THE OLD APPLE WOMAN.

" She sits by the side of a turbulent stream,
That rushes and rolls for ever,
Up and down like a weary dream
In the trance of a burning fever:
Up and down in the long Broadway
It flows with its endless paces;
Down and up through the noisy day,
A river of feet, and of faces.

Withered and dry like a leafless bush
That clings to the bank of a torrent.
Year in, year out, in the whirl and the push,
She sits, of the city's current.
Apples and cakes, and candy to sell,
Daily before her lying;
The ragged newsboys know her well,
The rich never think of buying.

Year in, year out, in her dingy shawl,
The wind and the rain she weathers,
Patient and mute at her humble stall;
But few are the coppers she gathers.
The loud carts rattle in thunder and dust,
Gay Fashion sweeps by in its coaches.
With an absent stare she mumbles her crust,
Being past complaint, and reproaches:

Yet in her heart there remains the hope
Of a Father's love, and pity:
For her the clouded skies shall ope',
And the gates of a heavenly City."

As a remedy against pride, "Bear in mind," said Spurgeon, "we are all descended from a certain disreputable old gardener, who was turned out of his Master's garden for stealing His apples."

The wild Apple tree (scrab, or crab), armed with thorns, grows in our fields, and hedgerows, furnishing verjuice in its fruit, which abounds with tannin, and is highly astringent, being of very helpful use against some forms of chronic diarrhœa. For

crab-apple jam, choose some of the largest crab apples; peel, score, and slice them; to each pound of these add one and a quarter pounds of lump sugar; and boil gently for three-quarters of an hour to a proper consistence. Verjuice also contains citric acid, about ten grains in an ounce. If a piece of a cut crab apple be rubbed on warts first pared to the quick, it will effectually cure them. Warts are brought about by the *bacillus porri*. "Their disappearance when charmed away by this or that whimsical method, is due," says Dr. Plowright, "to an auto-immunization, such as occurs likewise with regard to ringworm, leaving the child immune for the remainder of its life." But this would not obtain in the case of adults, or old persons, from whose skin warts may be similarly dispelled by incantation, etc. The greater probability is a physical effect produced on their skin by the mental suggestion. Verjuice—formerly verjuyce—may be expressed from other green crude fruits, such as unripe grapes, etc. "Having a crabbed face of her own, she'll eat the less verjuice with her mutton." Again, "His sermons with satire are plenteously verjuiced." Being rich in tannin, verjuice is a most useful application for old sprains. Similarly, a vinegar poultice put on cold is an effectual remedy for sprains and bruises; it will also sometimes arrest the growth of scrofulous enlargements of bones. The poultice should be made with vinegar and oatmeal, or with the addition of breadcrumb, as was directed in the *Pharmacopœia Chirurgensis* (1794).

APRICOT (*See* MARMALADE).

THE Apricot, *Armeniaca*, is a beautiful stone fruit, of a rich, reddish, yellow colour, "shining," as Ruskin has said, "in sweet brightness of golden velvet." Its name originated in the Roman epithet "*præcox*," early; because of its ripening so soon in the season. Shakespeare has told of it as "apricock." At the Cape, Apricots, dried and salted, are commended as remedial against sea sickness. They go by the name of "Mebos," and are a delicious confection.

The stones of Apricots are imported because of their kernels, which contain Noyau freely. At Cairo the pulp is made into a luscious paste, which is slightly dried, and then rolled, incorporating the kernels. In Italy the fruit is cut in half, the stones being removed, and the pulp spread out for a while in a spent

oven. These are the dried "Italian Apricots" of the shops. Take soft, ripe Apricots, lay them in salt water (about two ounces of salt to a quart bottle) for a few hours; then spread them on a mat to dry in the sun. The next day press them between the hands to flatten, and to let the stones come out. Again the next day repeat the same process. At the Cape these generally dry, and become "Mebos," after three or four days in the sun; but if the weather should be damp they may be dried in heated rooms, or in a cool oven. To crystallize the "Mebos," lay them in lime water for five minutes till they feel nicely tender; then take them out, and wipe them with a soft cloth, and rub coarse crystallized sugar well into each fruit. One and a half pounds of the sugar will serve for one pound of Mebos. Next pack closely in jars, with plenty of sugar interposed, and cork well. A green Apricot tart is considered by many persons the best tart that is made; but a green Apricot pudding is still better, just as a cherry dumpling is superior to a cherry tart. As to the medicinal virtues which have been attributed to what old John Gerarde, Master in Chirurgeries, 1636, styled the abrecock tree, "the fruit thereof being taken after meat, do corrupt, and putrifie in the stomacke; oeing first eaten before meat they easily descend, and cause other meats to passe down the sooner; but the virtues of the leaves of this tree are not yet found out."

ARROWROOT.

This is a starch obtained from the roots of several species of *Maranta*, chiefly the variety "*Arundinacea*" (West Indian). Brazilian Arrowroot (tapioca meal) is got from the roots of the *Manihot utilissima*, after first withdrawing their poisonous juice. English Arrowroot is made from the potato; and Portland Arrowroot from the corms of the *Arum maculatum* ("lords and ladies"). When dry, Arrowroot starch (eighty per cent) is put for packing into new barrels lined with paper, else it would become contaminated by surrounding flavours.

The absorption of Arrowroot, if simply prepared with water as a food, is altogether complete. Hence this starch is specially valuable in the treatment of irritative, or continued diarrhœa. But it does not furnish any proteid nourishment for growth, or muscular development. Furthermore, for contributing bodily warmth arrowroot (unless combined with milk

and sugar) is of but feeble effect. Dr. Hutchison tells us that a cupful of water-arrowroot contains only about thirty grains of starch. It would afford to the body less than a two hundredth part in fuel value of what even an invalid requires daily. The cheap kinds of arrowroot are quite as nourishing as those which are expensive.

ARTICHOKE.

DIETETICALLY are used the Jerusalem Artichoke, (*Helianthus tuberosus*), of the Sunflower order, and the Globe Artichoke (*Cinara maxima anglicana*), which is a magnified thistle. The tubers of the former, being dug up, are red outside, and white within ; they contain sugar, iron, albumin, an aromatic principle, and water. Formerly these tubers were baked in pies, with beef marrow, dates, ginger, raisins, and sack. They do not afford any starch, but yield 2 per cent of inulin,—an allied element. When first introduced into England, this Artichoke was "a dainty for a monarch!" but the tuberous roots have none of the potato's properties, being more of the turnip nature, As containing sugar in considerable quantities, their nutritive value is but slight; the more the tubers are chilled the better their quality. The term Jerusalem is a corruption of *Girasole*, a Sunflower, turning "*vers le soleil*," towards the sun; from which beneficent orb is mainly derived the oil-producing pabulum of the vigorous, sturdy, large flower, giving a practical lesson to the invalid as to the marvellous beneficial effects of direct open sunshine; the more the better, of course under proper precautions. In *Dombey & Son* (Dickens), at Leamington Spa, the languid old would-be juvenile Mrs. Skewton, full of affectations, and fashionable airs, having disposed herself in a studied attitude on the sofa, gives her hand condescendingly to old Major Bagstocke, when he pays her a visit on a broiling summer morning, and tells him with a simper, he "actually smells of the sun; is absolutely tropical." By a curious perversion of terms Artichoke soup, or Jerusalem soup, has been turned into *Palestine* soup.

To bake these tubers, peel and trim the required number, put them into a covered baking dish, using plenty of butter; season with salt and pepper; bake in a brisk oven for thirty minutes. When done they should be of a rich, brown colour. Serve them

while hot. They contain some amount of gummy substance, which makes them mucilaginous when boiled; and the water in which they are boiled becomes quite a thick jelly when cold, making an excellent foundation for sauces. "As to the broad *torus* of the Sunflower, ere it comes to expand, and show its golden face, this being dressed as the Artichoke, is to be eaten for a daintie. I once made macaroons with the ripe, blanched seeds, but the turpentine so domineered over all that they did not answer expectations."

Turpentine consists of an essential hydrocarbon oil, and a resin, "colophony;" it exudes from the incised bark of pine trees as an oleo-resin, which we term spirit of turpentine. When swallowed in a dose of from eight to twenty drops in a little milk, it promotes perspiration, and stimulates the bronchial mucous membrane. A larger dose might cause congestion of the kidneys, and strangury. For bleeding from the lungs five drops are to be given every half hour whilst needed. Quite small doses of turpentine, four drops or less, in milk, or on sugar, will promptly relieve kidney congestion. A pleasant form in which turpentine can be given is when made into a confection with honey and liquorice powder. In the low stages of bronchial pneumonic catarrh, turpentine will often prove specifically a saving sheet-anchor to rescue the patient. A capital way of then administering it is as turpentine punch. Rub a little fresh lemon rind on a lump of sugar: then drop from fifteen to twenty minims of spirit of turpentine on the lump of white sugar, and dissolve the same in a wineglassful of hot whisky punch; or the turpentine may be made into a smooth emulsion with yolk of egg, and peppermint water. It is to be noted that a destructive microbe, *diplococcus pneumoniæ*, underlies the lung-inflammation, and must be combated with germicidal remedies, turpentine being one of these. The inhalation of oxygen gas should be combined therewith in advanced severe cases.

Sunflower seeds if browned in the oven as you would coffee, and then made into an infusion after being freshly ground like that berry, serve admirably for the relief of whooping cough. Sweeten the decoction, and let the affected child drink it freely, especially at night.

The tubers of the Jerusalem Artichoke contain 80 per cent of water, 2 per cent of nitrogenized substance, a minute percentage of fat, 5 per cent of sugar, 1 per cent of inulin, and nearly 10 per

cent of other carbohydrates (warming constituents) which are transformable into sugar. Because all these leading principles are very soluble in water, the tubers should be stewed, and served with the juice, rather than boiled, and then taken out of their water. Again they are good if cooked *au gratin*, with whole capers instead of cheese; layers of artichoke with bread crumb between, adding the capers, and small bits of butter. These tubers contain 4 per cent more water than potatoes do. If served with milk, the Jerusalem Artichoke curdles this just as rennet acts.

Jerusalem Artichokes may be scalloped, to imitate scalloped oysters. Cut up a few of these Artichokes, and stew them till tender. Put one ounce of butter into a saucepan, and when it is melted dredge in flour enough to dry it up; add a little white stock from "bread soup," and give one boil. Now put back the Artichokes, with some pepper, and salt, and a little cream. Have ready some buttered scalloped oyster tins, lay the Artichokes in them, and as much liquid as they will hold; cover them over with bread crumbs, upon which drop a little melted butter. Brown them before the fire, or in the oven, and serve very hot indeed. Or, by another way, the remnant of cold boiled Artichokes from a previous meal may be utilized. Six good-sized ones will be required for the purpose; rub these vegetables through a wire sieve, and stir into them two tablespoonfuls of thick raw cream, with one wineglassful of liquified butter; season to taste with salt, pepper, and a dust of cayenne. Scald, skin, and remove the bones from half a dozen fine sardines, and press the flesh likewise through the sieve, mix it with the Artichoke paste, and add sufficient grated bread-crumbs to work it to a not too stiff paste. Have ready some oyster shells, which must be scrupulously scrubbed first, and pile a small quantity of the mixture upon each; then strew bread crumbs over the surface, and bake in a quick oven until just delicately browned, no real cooking being needed; serve very hot indeed, and garnish with fresh parsley.

The fresh juice of these Artichokes being pressed out before the plant blossoms, was employed in former days for restoring the hair of the head, even when the case seemed hopeless, and the person was quite bald. As a fact not generally known, it may be stated casually that red-haired individuals are credited with an immunity from baldness. Three dark hairs, being of

finer texture, occupy the space as a rule of one red hair. With respect to the practice of shaving, Pepys tells suggestively, and amusingly in his diary, May 31, 1662, "I did in a sudden fit cut off all my beard, which I had been a great while bringing up: only that I may with my pumice stone do my whole face, as I now do my chin, and to save time: which I find a very easy way, and gentle."

Evelyn has styled the Globe Artichoke "a noble thistle." It contains phosphorus in the form of phosphoric acid, and presents as edible parts a middle pulp, together with other soft delicate pulp at the base of each floret. "This middle pulp," writes Gerarde (1636), "when boiled with the broth of fat flesh, and with pepper added, makes a dainty dish, being pleasant to the taste, and accounted good to procure bodily desire." "The Heads being slit in quarters, first eaten raw with oyl, a little vinegar, salt and pepper, do gratefully recommend a glass of wine," (as Dr. Musset says,) "at the end of meals." "The same true Artichoke," told Aristotle, "has the power of curdling milk, and transforming it into *yourt*; therefore it should not be eaten therewith, but with pepper, which does not generate wind, and which clears the liver: and this is the reason why donkeys, who eat largely of such thistles, have better stomachs than men." Dr. Metchnikoff now advises a diet of curdled milk for prolonging human life. An ancient stockinger, of Nottingham, in the eighteenth century, lived to a great age on this particular food. It was his custom to have fourteen bowls of milk standing on his window sill, so as to ensure one daily, of the requisite age, (fourteen days,) for his consumption.

ASPARAGUS.

The title Asparagus comes from Sparage, of Persian origin, and its form Sparagus became corrupted by popular etymology into Sparagrass, and Sparrowgrass, sometimes called simply "grass"; each of which terms was until recently in good literary use. The part of the plant which is supplied for eating is the *turion*, or young shoots, covered with small scales in place of leaves. These sprouts contain asparagin, a crystalline substance which is an amide of aspartic acid, being sometimes called "althein," and found also in the juice of beets, in the sprouts of cereals, and in leguminous seeds during germination. The

chemical properties of asparagus are acetate of potash, phosphate of potash, and mannite, with wax, and the green resinous asparagin. The shrubby stalks of the plant bear red, coral-like berries, which yield when ripe, grape-sugar, and spargancin.

At Aix-les-Bains the eating of Asparagus forms part of the curative treatment for rheumatic gout. This vegetable was formerly known in England as "paddock cheese"—A syrup thereof is employed medicinally in France; taken at the evening meal asparagus conduces to sleep.

"Your infant pease t' asparagus prefer,
Which to the supper you may best defer."

The water in which Asparagus is cooked will serve to do good against rheumatism, though somewhat disagreeable to drink. Asparagin, which is technically amido-succinamic acid (being contained likewise in the potato) is of no direct nutritive value, but it plays a useful part, when taken dietetically, within the intestines, by limiting putrescent changes, and so promoting fuller digestion.

"Nothing," writes John Evelyn in his *Book of Salads*, "next to flesh is more nourishing than Asparagus, but in this country we overboil them, and dispel their volatile salts; the water should boil before they are put in." A salad of cold boiled Asparagus was an early English way of serving this vegetable. Gerarde advised that "Asparagus should be sodden in flesh broth, and eaten, or boiled in fair water, then seasoned with oil, pepper, and vinegar, being served up as a salad." This vegetable may fairly be given in diabetes, with a hope of its doing specific good. Though not producing actual sucrose in the urine when eaten freely by a healthy person, yet it forms, and excretes therein a substance which answers to the reactions observed by physicians if testing for sugar (except as to the fermentation test). The peculiar fixed principle asparagin, whilst stimulating the kidneys, and imparting a particular strong smell to the urine, after partaking of the shoots, exercises at the same time by the green resin with which it is combined, gentle sedative effects on the heart, becalming nervous palpitation of that organ. This asparagin occurs in crystals which may be reduced to powder, one grain whereof, when given three times a day, proves useful for relieving dropsy from difficulties of the heart. The same can be got likewise from the roots of liquorice, and marsh-mallow. Asparagus grows wild

on some parts of the English coast. Juvenal makes mention of a large lobster on a table surrounded with asparagus; and promises (in *Satire* xi.) to his friend Perseus a plate of mountain asparagus, which had been gathered by his farmer's wife.

"Montani
Asparagi posito, quos legit villica, fuso."

Originally the Asparagus shoot grew from twelve to twenty feet high. Under the Romans stems of this plant were raised, each three pounds in weight, heavy enough to knock down an attendant slave with. But the former Grecian doctors denounced Asparagus as injurious to the sight.

"English cooks," says Sir Henry Thompson, "rarely follow the proper method for boiling Asparagus, which should be as follows: The stalks of a stouter sort should be cut of exactly equal lengths, and boiled standing, tops upward, in a deep saucepan, nearly two inches of the heads being out of the water; the steam will then suffice to cook these heads, which form the most tender part of the plant; at the same time the tougher stalky portion is rendered succulent by the longer boiling which this plan permits. Instead of the orthodox twenty minutes allowed to average Asparagus lying horizontally in the saucepan, after the usual English fashion, (which only half cooks the stalk, and overcooks the head, diminishing its flavour, and consistence), a period of from thirty to fifty minutes, on the plan recommended, will render delicious fully a third more of the head, which is cooked by the steam alone. One reason why it is not uncommon to hear the best product of the fields of Argenteuil depreciated in this country, and our own Asparagus preferred, is that the former is insufficiently cooked at most English tables."
Pliny mentions in glowing terms the alimentary use of Asparagus. Its sprouts contain 94 per cent of water, nearly 2 per cent of nitrogenized matter, some fat, a minute percentage of sugar, and over 2 per cent of other organic substances. The asparagin forms one seventh part of the whole amount of non-nitrogenized substance. Formerly the roots were also used medicinally, and the juice of the red berries was an ingredient in what was known as the Benedictine electuary.

Mortimer Collins tells that Liebig, or some other scientist, maintains that asparagin, the alkaloid of asparagus, develops form in the human brain; so that if you get hold of an artistic child, and give him plenty of asparagus, he is likely to grow into

a second Raffaelle. Evelyn presented some shoots "raised at Battersea, in a natural, sweet, and well-cultivated soil, sixteen, each of which weighed about four ounces, to his wife, showing 'what Solum, cœlum, and industry will effect.'"

A really good soup, of special nutritive virtues, can be made with the tough ends of asparagus sprouts, cooked, and recooked in the same water until they have become soft, then mashed, and rubbed through a coarse sieve, adding a pint of milk thickened with flour, and a pint of the water in which the vegetable was boiled; also thickening this water with two tablespoonfuls of flour into which two tablespoonfuls of fresh butter are smoothly intermixed.

Mrs. Earle ("third *Pot Pourri*") found Asparagus quite poisonous in her case. She wrote to ask Dr. Haig how this fact might be explained. He then replied that as far as he knew Asparagus is harmless. But three years afterwards he wrote to her again, telling "what he felt sure would interest her, that the Asparagus is the cause of all your troubles, when you eat it so freely in the Spring." In a leaflet of his it is stated positively that the "Xanthin of certain vegetable substances, peas, beans, lentils, mushrooms, asparagus, etc., is as pernicious as that of fish and flesh;" but this dictum is certainly questionable.

Charles Lamb gave it as his opinion that Asparagus seems as a vegetable food to inspire gentle thoughts. Dickens narrates, in *David Copperfield*, concerning Dr. Blimber's educational establishment at Brighton, where little Paul was placed: "It was a great hot-house in which there was a forcing apparatus incessantly at work; all the boys blew before their time. Mental green peas were produced at Christmas, and intellectual asparagus all the year round. Mathematical gooseberries (very sour ones, too) were common at untimely seasons, and these from mere sprouts of bushes, under Dr. Blimber's cultivation."

Medicinally a fluid extract is made from Asparagus tops by the manufacturing chemist, which proves most helpful in dropsy (whether because of obstructed liver, or of defective heart action), by augmenting the flow of urine, and thus carrying off the dropsical effusion. Teaspoonful doses of this fluid extract should be given twice a day with one or two tablespoonfuls of water.

The chemical constituent principles on which Asparagus depends chiefly for its action on perspiration, and urination, are sulphuretted, and phosphuretted hydrogen.

The old English name "Sperage" bears reference to an ancient usage of feathery brushes made with sprays of the wild plant, to be employed for sprinkling ("asperging") the congregations in old Roman churches of Southern Europe. At Ravenna the sprouts have been sold three to the pound.

ASS'S MILK.

THERE are various milks used for dietetic purposes, some of these being likewise medicinal. Comprised among them are the milk of cud-chewing animals, human milk, ass's milk, and mare's milk. The essential difference between the first two of these milks is in the character of the casein, or curd, and the proportions thereof to the other parts which do not clot. The milks of all mammals (creatures which give suck), consist of water which holds in virtual, or actual solution, salts, sugar, cream and other clotting substances, with minute globules of fat uniformly suspended throughout the fluid, though tending towards the top because of their lighter weight. Dilution with water will not alter the fact that cow's milk is acid in reaction, whilst the human variety, when drawn directly from the mother's breast, is alkaline. Ass's milk contains less solids than either of the other sorts, whilst being more rich in sugar than the rest (except human milk). It is poor in curd, and fat. being therefore light, and easy of digestion. This milk has in every age of physic been valued as a prime antidote to wasting from consumption of the lungs. Furthermore, leading authorities unanimously pronounce as to the superiority of ass's milk for rearing feeble infants. But Dr. R. Hutchison disagrees from this generally received notion. He complains that being especially poor in fat, which is so important for infants, it is of itself ill suited for their nourishment. Moreover, it is slightly laxative, containing relatively more cheesy substance, and less albumin, than human milk. "The percentage of fat," says Ellenburger, "is much too low to make it proper for habitual use by children."

An artificial milk of the same nature as that of the ass may be easily made (on paper) by diluting cow's milk (thus reducing the percentage of sugar, curd, and fat) to the quality of mother's milk; but the difficulty of digesting the particular curd from the cow still remains to be overcome. On the whole, therefore, ass's milk is the nearest approach to good milk from the human

mother. It is not yielded by the maternal animals unless the foals are allowed to be with their mothers in the donkeys' dairy, each foal having a smaller pen beside that of its mother. This article of nursery requirement fetches six shillings a quart, being sold in specially protected sealed bottles. The she-asses are milked twice a day, and afford severally from half a pint to a pint at each milking. For persons at a distance a milch donkey may be hired at the cost of one guinea a week, plus expenses of transport. The amusing fact may be remembered, but none the less will bear repetition, that Thomas Hood, in his famous *Ode to Rae Wilson* (1843), has drawn a most suggestive moral from the story of a consumptive girl for whom ass's milk was prescribed :—

" Once on a time a certain English lass
Was seized with symptoms of such deep decline,
Cough, hectic flushes, ev'ry evil sign,
That,—as their wont is at such desperate pass,
The doctors gave her over—to an ass.
Accordingly, the grisly shade to bilk,
Each morn the patient quaff'd a frothy bowl
Of asinine new milk,
Robbing a shaggy suckling of a foal,
Which got proportionately spare, and skinny :
Meanwhile the neighbours cried, ' poor Mary Ann !
She can't get over it ! she never can ! '
When lo,—to prove each prophet was a ninny—
The one that died was the poor wet nurse Jenny.

To aggravate the case,
There were but two grown donkeys in the place,
And most unluckily for Eve's sick daughter
The other long-ear'd creature was a male,
Who never in his life had given a pail
Of milk, or even chalk and water.
No matter ; at the usual hour of eight
Down trots a donkey to the wicket gate,
With Mister Simon Gubbins on his back.
' Your sarvint, Miss—a werry spring-like day ;—
Bad time for hasses, tho' ! good lack ! good lack !
Jenny be dead, Miss ; but I've brought 'ye Jack ;
He does'nt give no milk,—but he can bray ! ' "

" So runs the story ;
And, in vain self-glory
Some Saints would sneer at Gubbins for his blindness ;
But what the better are their pious saws
To ailing souls than dry hee-haws
Without the milk of human kindness ? "

It is a significant fact bearing on this subject, that asses are

not susceptible of any tuberculous disease, such as pulmonary consumption.

Horace Walpole, and after him Byron, accused Lawrence Sterne (1758) of having preferred whining over a dead ass (see *Sentimental Journey*) to relieving a living mother in distress.

During the siege of Ladysmith, in the recent South African war, it became proved that while horseflesh is but sorry fare, and that of the dog not to be desired, yet the humble moke is, when dressed for table, rather a delicacy than otherwise. Thirty odd years ago the experience of the Parisians pointed to the same conclusion. Genin, the famous Restaurateur, pronounced that the dog was the siege-cook's despair; its flesh has a particularly disagreeable flavour which no seasoning can disguise. But "as to the other animal," said he, "l'ane etait rare: on se trouvait heureux d'en avoir a quinze, ou vingt francs la livre. Le consommé d'ane a un petit goût de noisette tres agréable. En rosbif, avec des haricots a la Bretonne, assaisonné de sa graisse, c'etait un vrai régal." Elia has discoursed of a young ass in "Christ's Hospital, five and thirty years ago," to pamper which animal, a petty Nero of a schoolmaster nearly starved forty of the boys, by exacting contributions to the one half of their bread. Incredible as it may seem, he had contrived to smuggle the ass in, and keep it upon the leads of the said boys' dormitory. "This game went on for better than a week, till the foolish beast, not able to fare well but he must cry roast meat; foolisher, alas, than any of his species in the fables, waxing fat and kicking, in the fullness of bread, one unlucky minute must needs proclaim his good fortune to the world below; and laying out his simple throat blew such a ram's-horn blast as (toppling down the walls of his own Jericho) set concealment any longer at defiance. The client was dismissed, with certain attentions, to Smithfield, but I never got to learn that the patron underwent any censure on the occasion."

ASTRINGENTS.

The Crab-apple has already been referred to as furnishing *verjuice*—a powerful astringent—of particular use when applied externally for old sprains.

Tannin in another form, or gallo-tannic acid, which is contained plentifully in what are known as Oak-apples (or galls), as well as in oak-tree bark, will serve to restrain bleedings if taken

internally; and the bark when finely powdered, and inhaled pretty often, has proved very beneficial against consumption of the lungs in its early stages. Working tanners are well known to be particularly exempt from this disease, in all probability through their constantly inhaling the peculiar aroma given off from the tanpits; and a similar remedial effect may be produced by using constantly as a snuff some fresh oak bark, dried, and reduced to a sufficiently fine powder, whilst also inhaling day after day the steam given off from recent oak bark infused in boiling water. A strong decoction of oak bark is most useful for applying to reduce prolapse of the lower bowel, through a relaxed fundament.

Gospel Oaks were formerly resting stations for short religious services when beating the parish bounds.

> "Dearest, bury me
> Under that holy Oke, or Gospel tree,
> Where, though thou see'st not, thou may'st think upon
> Me, when thou yearly goest procession."—*Herrick.*

For a useful astringent drink, as advised by Dr. Yeo, add to a pint of boiling milk a quarter of an ounce of powdered alum, previously mixed with three or four tablespoonfuls of hot water; then strain. Again, for croup, combine a teaspoonful of powdered alum (sulphate of alumina and potash) with two teaspoonfuls of sugar, and give this promptly; when almost immediate relief will follow.

BACON (*See also* PORK).

THE side, and belly of a pig are called Bacon, when salted and cured in a way similar to that which converts the leg of pork into ham. If the whole side of a pig has been salted, and smoke-dried, it is known as a flitch of bacon. In many districts saltpetre and sugar are used, in addition to salt, for curing the meat to be smoke-dried.

About Germany the bacon is so splendidly cured that it may be eaten without any further cooking. But the pig is more liable to diseased flesh than the ox, or sheep, because of its greediness for unwholesome food, though this risk may be guarded against by care in feeding the animal. A harmful parasite, the *Trichina spiralis*, is frequently noticed in Germany as infesting the human body, through eating smoked ham, and

sausages, in an uncooked state. The black pig is considered by breeders the best of its kind for food. Dr. Hutchison tells that the comparative indigestibility of pork is shown by the fact that three and a half ounces of it require three hours for their complete digestion, as compared with two hours for an equal quantity of beef. This difficulty is fully accounted for by the large accumulation of fat between the fibres of the pork-flesh. On the other hand, the fat of bacon seems to be in a granular form, which is not difficult of digestion; so that this can often be eaten by persons to whom other kinds of fat are intolerable. For which reason bacon is an invaluable aid for nourishing delicate children, and diabetic, or consumptive patients, in whose diet the free use of fat is indicated.

From the very earliest times the wild pig seems to have occupied a foremost place as an article of diet, seeing that the bones of the wild boar are found in almost all kitchen middens of prehistoric times; and the animal plays an important *rôle* in ancient Scandinavian legends. Even the Hebrews—for whom the pig was condemned as an unclean beast by the Mosaic law—must have afterwards set this law at naught in our Saviour's time, judging by the herds of swine which fed on the hills near the Sea of Tiberias; since, unless pork was eaten then, it is difficult to conceive for what purpose these droves of swine were kept. Towards correcting in some measure the grossness of his foods, the pig, by instinct, grubs up antiscorbutic roots, and knows that a piece of chalk, or a mouthful of cinder, is a most sovereign remedy against his indigestion. The insalubrity of pork is generally owing to the uncleanly, and unwholesome feeding of the animal; and the quality of its food has a marked influence on the flavour of its flesh. Thus, pigs fed mainly on potatoes have a very white and tasteless meat, whilst the flesh of those porcine animals whose food has consisted largely of beech-nuts, has an oily taste.

The notion that eating pork tends to cause cancer is disproved as regards the Jews (of whom a considerable number are no longer strict adherents to the Hebrew dietary laws); and doctors who practice among them have learnt that cancer attacks orthodox Jews as often as it assails the most heterodox in diet of their race. Nevertheless, these people are rigidly careful about the purity, and quality of what they eat, and therefore, as it would seem, cancer is considerably less prevalent

among them than among the general population of our country.

Lard is the fat of pork melted down, and sold in bladders, or tubs; the lower the heat at which it is melted, the smoother and less granular it is. Usually water is mixed with it in melting, and often much water is left commingled. The French word "lard" signifies in the first place bacon, whilst our English lard is termed in France "*saindoux*." Good lard should contain 99 per cent of hog's fat. In the peasant speech of Devon it is named "mort." "Aw, Lor, Missis! dawntee tell me nort about butter; poor vokes' chillern be föced tu ayte curd an' mort now times be sa bad." In Lincolnshire lard is known as *seam*, and by analogy the white wood-anemone, as distinguished from the yellow buttercup, is the *seam* cup. In Dryden's *Ovid* we read of Baucis and Philemon:—

> "By this the boiling kettle had prepared:
> And to the table sent the smoking lard,
> On which with eager appetite they dine,
> A savoury bit that served to relish wine."

Charles Lamb, as is well known to all readers of *Elia*, has devoted a delightful essay to the subject of Roast Pig, and more especially to that luxurious and toothsome dainty called "Crackling," showing how this Crackling was first exultingly discovered. The said immortal rhapsody, a "Dissertation upon Roast Pig" never tires by repetition: "Of all the delicacies in the whole *mundus edibilis* I will maintain it to be the most delicate, *princeps obsoniorum*. I speak not of your grown porkers—things between pig and pork,—these hobbledehoys,—but a young and tender suckling, under a moon old, guiltless as yet of the sty, with no original speck of the "*amor immunditiæ*, the hereditary failing of the first parent, yet manifest; his voice as yet not broken, but something between a childish treble and a grumble, the mild forerunner, or *præludium*, of a grunt. *He must be roasted*. I am not ignorant that our ancestors ate them seethed, or boiled; but what a sacrifice of the exterior tegument! There is no flavour comparable, I will contend, to that of the crisp, tawny, well-watched, not over-roasted *crackling*, as it is well called; the very teeth are invited to their share of the pleasure at this banquet, in overcoming the coy, brittle resistance,—with the adhesive oleaginous—O, call it not fat—but an indefinable sweetness growing up to it, the tender blossoming of fat,

fat cropped in the bud, taken in the shoot, in the first innocence, the cream, and quintessence of the child-pig's yet pure food! the lean—no lean, but a kind of animal manna—or rather fat and lean (if it must be thus), so blended and running into each other that both together make but one ambrosian result, or common substance! He is the best of Sapors! Pine-apple is great. She is indeed almost too transcendent; a delight, if not sinful, yet so like to sinning that really a tender-conscienced person would do well to pause; too ravishing for mortal taste, she woundeth, and excoriateth the lips that approach her; like lovers' kisses, she biteth; she is a pleasure bordering on pain, from the fierceness and insanity of her relish; but she stoppeth at the palate; she meddleth not with the appetite, and the coarsest hunger might barter her complacently for a mutton-chop. Pig—let me speak his praise—is no less provocative of the appetite than he is satisfactory to the criticalness of the censorious palate. Behold him while he is doing! it seemeth rather a refreshing warmth than a scorching heat that he is so passive to. How equably he twirleth round the string! Now he is just done. To see the extreme sensibility of that tender age, he hath wept out his pretty eyes; radiant jellies, shooting stars! Then see him in the dish, his second cradle, how meek he lieth! The strong man may fatten on him, and weakling refuseth not his mild juices. So much for the sucking-pig; then his sauce is to be considered. Decidedly a few bread-crumbs done up with his liver and brains, and a dash of mild sage. But banish, dear Mrs. Cook, I beseech you, the whole Onion tribe! Barbecue your whole hogs to your palate, if you will; steep them in shalots; stuff them out with plantations of the rank, and guilty garlic; you cannot poison them, or make them stronger than they are; but consider he (the childish porker) is a weakling—a flower!"

In classic Roman times the Emperor Claudius entered the Senate one day, and called out, "Conscript Fathers! is it possible to live without pickled pork in slices?" And the venerable Fathers replied straightway, "Oh, Sire, it is better to die than to have to live without salt pork." A leg of pork when skinned, and roasted, is called by many persons *mock goose*. Some cooks, when pork is about to be served, score the skin in diamonds, and take out every second square. The fat of pork consists almost entirely of palmitic, and oleic glycerides.

Fried bacon fat, and its liquid part, serve usefully to correct constipation. And a curious old remedy to stay nose-bleeding is vouched-for again recently by Dr. Atkinson—to "take a piece of fat bacon, about 2 or 3 inches long, and of sufficient size; cut it into a proper shape, and as large as can be easily forced into the nostril; apply it by pressing into the bleeding nostril, and let it remain in place several hours. It controls the hæmorrhage, and is not uncomfortable to the patient."

By the processes of salting, and smoking, the flesh of the hog is made more digestible. Like all fat meats, it is deficient in water. The Romans discovered fifty different flavours in pork; and under the hands of their skilled cooks, swine's flesh was often transformed into delicate fish, ducks, turtle-doves, or capons. With them the Trojan Hog was a favourite dish, which was a gastronomic imitation of the Horse of Troy, its inside being stuffed with asafœtida, and myriads of small game. In Lincolnshire, a pig when first put up to fatten, has garlands hung round its neck to avert the spell of malicious witches, these garlands being made from branches of the Mountain Ash, or Wicken-tree, or Witchen Wicken. Truly may it be said that without pork there would have been no bacon, and without bacon no accomplished cookery.

"Chowder" is a dish of American origin; it consists of boiled pickled pork, cut in slices, with fried onions, slices of turbot, or other fish, and mashed potatoes, all placed alternately in a stewpan, and seasoned with spices and herbs, Claret, also ketchup, and then simmered together.

When Benjamin D'Israeli first went as a young man down to High Wycombe (1832) on a political canvass among the Buckingham farmers, after the week's end, when writing to his sister, he said: "I have been to Marathon; we have lived for a week on the Honey of Hymettus, and the Boar of Pentelicus; we found one at a little village—just killed—and purchased half of it, but this was not so good as Bradenham pork." It is remarkable that the cry of a raven resembles the words "Pork! Pork!"

> "From the mountains high
> The ravens begin with their 'pork, porking' cry."—*Sylvester.*

A pork pie with raisins has for many years held its own at farmhouses in the Midlands; this is a raised pie, in which some

stoned, and halved raisins are interspersed with the pork; about a quarter of a pound of the fruit to each pound of meat is sufficient. So that the full flavour of the pie may be appreciated, no sage is to be included, and only a moderate seasoning of salt, and pepper is to be used.

At St. Stephen's, Westminster, in former days, the presiding genius over the kitchen arrangements was one Bellamy, famous for his pork pies, which have gained immortality, since the elder Pitt in his last dying words expressed a wish for one of these Bellamy dainties. Sam Weller, expostulating with Mr. Winkle for his escapade from Mr. Pickwick, exclaimed: "Come, Sir! this is too rich. as the young lady said when she remonstrated with the pastrycook arter he'd sold her a pork pie as had got nothin' but fat inside." In 1666 Pepys bought some pork from a butcher, who "by the same token commended it as the best in England for cloath and colour." The Duc de Richelieu's cook became noted by boiling down forty hams to make stock for a single soup. Sydney Smith, when writing to Lady Holland in January, 1809, said: "Many thanks for two fine Gallicia hams; but as for boiling them in *wine*, I am not as yet high enough in the Church for that, so they must do the best they can in water." But the day of getting good old-fashioned country-cured ham, and bacon, is practically a thing of the past, particularly in our large cities. Instead of its taking three months to cure the meat after the patient, old-time, wholesome way, the modern hog walks into the packing-house yard in the morning, and within two or three days is shipped as cured hams. The beautiful brown colour that once was the result of smoking with wood, is now procured in a few hours by logwood, or other dyes. The smoky flavour is produced by pyrolignic acid; and, instead of the old-fashioned sweet pickle, a composition is used of borax, boracic acid, sulphites, salicylic, and benzoic acids. But to paint a ham with the acid (pyroligneous) of wood vinegar, is an ineffective substitute for smoking in a Hampshire chimney where wood fires are burnt, so that the hams treated therein are invariably alkaline, with their albumin coagulated by the continued heat, and their flesh interpenetrated by creosote fumes, whereby microbic engendure therein is prevented. At the Zaduska, or Russian luncheon, one dish which is sometimes seen is raw sucking-pig, which, though not sounding nice, is distinctly good, being served in very small cubes, highly seasoned, and laid on

toast. Other fanciful condimentary substances have been employed with pig-meat, by this, or that "*chef*" :—

"Yet no man lards his pork with orange peel;
Or garnishes his lamb with spitch-cock eel."

Art of Cookery.

A "pig's whisper" is proverbial as of rapid utterance. "You'll find yourself in bed in something less than a pig's whisper," said Sam Weller.

BALM (*see* HERBS.)

BANANA.

THE Banana (*Musa sapientum*), now so popular with us, and of such common use as a highly nutritious vegetable product of the plantain tree, especially for children (who eat it with gusto), was probably an East Indian native fruit. It was cited in the sixteenth centnry as dating from Guinea, and is now cultivated everywhere throughout the tropics. Bananas have been long noted for their efficacy in correcting the fluxes to which Europeans are often subject on their first coming into the West Indies. An excellent drink is made there from the juice of the ripe fruit when fermented; likewise a marmalade which is esteemed as a pectoral of much worth, and is very refreshing. Three dozen plantains are sufficient to serve a man for a week instead of bread. Unfortunately, however, we do not get our imported Bananas in a ripe condition. Like most other tropical fruits, these have to be plucked before the sun has completed its beneficent work of converting their starch within the substance of the Bananas into sugar. Such a ripening process can only be carried to perfection whilst the fruit is still a part of its parent organism, the living plant. What is termed ripening here of the Bananas, after importation, is actually only a softening, and a step towards decay. But few persons realise this fact with regard to our fruits in England of every kind. Dealers will meet the objection that a certain fruit under sale is not ripe, with the assurance, "Oh, it will ripen in a few days, particularly if put in a greenhouse, or in the warm sunshine." It is true that very hard fruit may be made thus to soften, and seem mellow; indeed, it may even need such sun-bakings so as to become at all palatable; but the process is not a ripening; fruit thus treated will presently rot, and cannot be stored for the winter.

For baked Bananas, "take the fruit just after the rind has begun to grow golden; cut off each end of the pod, leaving on the jacket, after having first washed the Banana. Bake the desired number of them thus for twenty or thirty minutes in the oven, and serve them then in their jackets; to be split lengthways, and buttered when eaten" (Broadbent).

The fresh Banana contains 26 per cent of fattening, warming sustenance (carbohydrates), with an appreciable quantity of building-up material (proteid). If dried in the sun, and well sprinkled with sugar, Bananas can compare favourably in nutritive value with dried figs. Being ground into a flour, Bananas will serve for making a bread, which is light, and easy of digestion. In America the fruit, whilst unripe, is dried in the oven, and then eaten as bread, which may be kept in this condition for a long time. It has been asserted that the Banana, when largely consumed as food, produces decay of the teeth, this statement being made because the Brazilians, who live chiefly on Bananas, have, as a rule, shockingly bad teeth; but it should be remembered that their men, women, and children devour sugar also to a very unwholesome extent in the shape of sweetmeats, and confectionery of all sorts; moreover, they indulge largely in hot infusions of native tea. Already some twelve millions of Banana bunches have been exported from Jamaica alone into this country. The fruit is twenty-five times more nutritious by its starchy constituents than good white bread. A bunch of Bananas weighing fifteen pounds will yield three pounds of the flour. As the Bananas ripen, their starch becomes converted into sugar. Their pulp contains grape sugar, cane sugar, nitrogenous matter, celiulose, and fat, with phosphoric elements, lime, earthy salts, and some iron.

To prepare a compôte of Bananas: Having peeled the fruit when dead ripe—but not a speck beyond this,—and having removed any coarse threads, plunge the Bananas into boiling water for a few seconds, and then at once drain them. Put the fruit into a basin, and coat it with boiling syrup (adding, it may be, half a glass of Maraschino to the pint). When cold, dish in a pyramid, with the syrup over. For "creamed Bananas," mash them with a fork, and place this in a small saucepan; cover with a little hot milk, and add sugar, if desired; then pour it over toast. Excellent Banana sandwiches are to be made, the merest dash of honey being substituted for sugar.

The Banana is well suited for persons who cannot easily digest starchy foods. Stanley, the African traveller, found that a gruel prepared with Banana flour, and milk, was the only thing he could digest during gastric attacks. In *Thoughts on the Universe*, by Master Byles Gridley (O. Wendell Holmes' *Guardian Angel*), stands recorded the reflection, "What sweet, smooth voices the negroes have! A hundred generations fed on Bananas! Compare them with our apple-eating white folks! It won't do!"

"By reason of its fat-forming constituents being much in excess of its muscle-feeding, and nerve-nourishing proteids, the Banana," says Dr. R. Hutchison, "is too bulky to be able to serve as the main constituent of a healthy diet; about eighty would have to be eaten daily so as to yield a proper supply of vital energy for the body. No wonder then that in tropical countries, where Bananas are largely consumed, the inhabitants are apt to show an undue abdominal development." But this computation is surely overdrawn? A barrel of sugar made from Bananas was recently exhibited in New York, the taste being pleasant, and palatable, the Banana flavour, full, and sweet in itself, conveying a really tropical impression. But the great trouble is to make this sugar perfectly dry; it can be sold much cheaper than other sugars.

BARBERRY (*see* FRUITS).

BARBERRY berries, as supplied at the shops, have some excellent medicinal virtues. They grow on a cultivated variety of the wild shrub *Berberis*, as found in our English copses, and hedges, particularly about Essex. These small scarlet berries are stoneless when old, containing malic and citric acids; they also afford curative principles, "berberin," and "oxyacanthin," which exercise a stimulating effect on the liver, and are astringent. Barberry jam helps to obviate gravel, and to relieve irritation of the bladder. Tusser, in his *Good Huswifelie Physicke* (1573), has commended:—

> "Conserve of Barbarie; Quinces as such,
> With Sirops that easeth the sickly so much."

A jelly having virtues of this kind may be made by boiling an equal weight of the berries (when ripe) and of sugar together, and straining off the sweet juice to jelly when cool. The syrup of Barberries forms, with water, an excellent astringent gargle

for sore, relaxed throat. Barberry tea, concocted from the yellow bark, will afford prompt relief in an attack of kidney colic from gravel. Some of it should be drunk in small quantities every five minutes until the pain is subdued. Such a tea of infused Barberry twigs is used locally in Lincolnshire for persons troubled with jaundice, or gall-stones.

"The good Elizabethan housewife had always by her a store of cordials, and restoratives, such as rose-water and treacle, herbs for the ague, fumitory water for the liver, cool salads, syrups and conserves of Quince, and Barberry." A drink made from the Barberry root, and bark, being sweetened with syrup of Barberries, has proved remarkably curative of ague. Also a jam, or jelly, prepared from the fruit, affords specific help in Bright's disease, or albuminuria. Provincially the bush is called "Pipperidge (*pepin*, a pip, and *rouge*, red) because of its small, scarlet, juiceless fruit. To make Barberry jam, according to a good old recipe: "Pick the fruit from the stalks, and bake it in an earthen pan; then press it through a sieve with a wooden spoon. Having mixed equal weights of the prepared fruit, and of powdered white sugar, put these together in pots, and cover the mixture up, setting them in a dry place, and having sifted some powdered sugar over the top of each pot."

Barberries are called "Rapperdandies" in the North, and "Rilts." The ancient Egyptians made a drink from them highly esteemed in pestilential fevers. "Elusius setteth it down as a wonderful secret which he had from a friend, that if the yellow bark of Barberry be steeped in white wine for three hours, and be afterwards drunk, it will purge one very marvellously," thus unloading an oppressed liver. The berries upon old Barberry bushes are the best fruit for preserving, or for making the jelly.

BARLEY.

Hordeum vulgare, or Common Barley, affords a grain chiefly used in Great Britain for brewing, and distilling, but which possesses dietetic, and medicinal virtues of importance. We fatten our swine on this cereal made into meal, which is, however, less nourishing than wheaten flour, and is apt to purge when eaten in bread. The chemical constituents of Barley are starch, gluten, albumin, oil, and hordeic acid. From the earliest times it has been employed to prepare drinks for the sick, whether in

feverish disorders, or as a soothing decoction for sore lining membranes of the chest, and the bladder. Barley is especially rich in iron, and phosphoric acid. Barley bread, always of close texture, was exclusively used in England as late as the time of Charles the First, though, because of its deficiency in gluten, it cannot be made light of itself; if mixed with wheaten flour its combination answers very well, and the bread becomes palatable. Throughout Cumberland in the seventeenth century wheaten bread was an indulgence only allowed about Christmas time, even among the principal families. The crust of the everlasting goosepie which adorned the table of every county magnate, was invariably made of Barley meal, which is rich in mineral matter, and contains more fat than wheat.

If an ounce of gum arabic be dissolved in a pint of a hot decoction of Barley, this makes a most soothing drink to allay irritation of the bladder, and of the urinary passages. Honey may be added beneficially to the decoction for bronchial coughs. Barley bread (or porridge) is apt to purge; but such was in ancient times the bread of the Egyptians, likewise of the Jews in the days of our Saviour, as we learn from the miracle wrought with respect to the lad's five barley loaves, (and two fishes). For Barley soup, put a quarter of a cup of well-washed Barley, with a bayleaf, and a small blade of mace, into a pint and a half of cold water, and boil slowly for three hours. Take out the bayleaf, and mace; then add a small onion (sliced fine), with two French carrots (cut in dice), and cook these until tender; next add a pint of milk, a good tablespoonful of butter, with salt and pepper to taste; let it come to the boil, then remove it from the fire, and stir into it the yolk of one egg, perhaps beaten with two tablespoonfuls of cream.

Sixty or seventy years ago the breakfast of Cornish apprentice lads on a farm was invariably "sky-blue and sinkers." Into a three-legged crock fixed over a brisk fire of furze, and turf, was poured a quantity of water. While this was coming to the boil some Barley-flour was mixed in a basin with scalded milk, and the same was emptied into the water in the crock, and allowed to boil for a minute or two. Next it was poured into basins containing sops of Barley bread. These sops sank to the bottom, nothing being visible but the liquid mess, sky-blue in colour, and therefore called in its entirety "sky-blue and sinkers," being eaten with an iron spoon. As the price of wheat was in

those days nearly double that of Barley, wheaten bread was a delicacy which the working classes could but rarely afford themselves: their ordinary bread, and their pasties, were made of Barley-flour. These pasties consisted of a crust mixed without fat, or butter, and containing either potatoes, or a few pieces of turnip; a bit of rusty bacon being considered a luxury.

By the ancients a thick, turbid drink was made with Barley, and known as Orgeat. This became adopted by the French, who extended the name to "Ptisana," and subsequently to other vegetable decoctions made for invalids. Thus it has happened that the name Orgeat has slipped away from Barley, and become attached to preparations of sweet almonds.

Formerly likewise, the confectioner's Barley sugar (nowadays simply sugar boiled until it becomes brittle, and candied) was boiled in a decoction of Barley, and hence its name. In *The Complete Angler* (1653) Piscator bids the Hostess of an "honest alehouse" give to his brother Peter, and to Venator, "some of her best Barley wine, the good liquor that our honest forefathers did use to drink of,—the drink which preserved their health, and made them live so long, and to do so many good deeds."

Barley-water for the sick room is a valuable demulcent drink, though containing but little nutriment; it should be made from the pure farina of fine Scotch Barley, which is better than Pearl Barley for the purpose. Or, take two ounces of Pearl Barley washed clean with cold water; put this into half a pint of boiling water, and let it boil for five minutes; pour off the water, and then add to the Barley two quarts of boiling water; boil it to two pints, and strain; the same is plain, simple Barley-water. Figs (sliced), raisins (stoned), and liquorice (cut up) are sometimes added further.

BEAN.

THE common White Bean (*Phaseolus vulgaris*), because of its seeds bearing a close resemblance to the kidney, and to a sexual gland, was worshipped by the Egyptians, who would not partake of it as a food. Furthermore, by reason of its marked tendency to cause sleepiness, the Jewish High Priest was forbidden to eat Beans on the day of Atonement. The black spot which is seen on these products was regarded as typical of death. In Italy, on November 2nd, All Souls Day, folk eat sweetmeats

which are called "*Favi dei mortei*," or beans of the dead; this custom being a survival of an ancient pagan bean-eating rite. Also, a dish of them is left on the table all that night for the ghosts of the departed who may then be abroad. "The Bean plant," says Dr. Thudicum, "is interesting, and instructive; its leaves droop at night, and expand again by day; thus there is perhaps some connection between the sensitiveness of this plant, and the fact that it eliminates a nutriment for brain, and muscles." A pithy proverb teaches that "A Bean at liberty is better than a comfit in prison;" whereat the prosaic Lord North drily remarked, he shouldn't care to eat a comfit, out of prison.

The Kidney, or French Bean, when cooked with its pod, is "haricot vert," and when the seeds alone are served, either fresh, or after drying, they are "haricots blancs." The amount of vegetable cellulose in the pod makes its digestion tedious, so that this is a wasteful form of food. The Scarlet-runner (*Phaseolus multiflorus*) is allied to the French Bean, and when stewed makes Turkish Bean. The broad Windsor Bean is *Faba vulgaris*. Both beans, and peas are more readily digested if lemon-juice is added to them in cooking, which presently becomes converted into an alkaline salt, and thus assists to dissolve the starches. Marrowfat Beans stewed are very nutritious, and easily digested. Pick over carefully, and wash one quart of these beans, and soak them in water overnight; in the morning drain, add fresh cold water, and bring to the boil; drain again, and turn them into a four-quart stone jar; put in a generous cup of butter, two large tablespoonfuls of Porto Rico molasses, two tablespoonfuls of salt, less than a teaspoonful of pepper, and fill the jar with boiling water. Put it in the oven, covering the jar with a tin cover; it must be cooked in a slow oven for eight or nine hours. The water should last until the beans are perfectly stewed, and when done there will be a good gravy left, about one-third of the depth of the beans in the jar; keep the beans covered for two or three hours whilst cooking; serve, if liked, with Chili sauce.

Beans and peas should be steeped in water overnight, or longer, and the water then thrown away. One of the best methods of cooking them is to stew them for about four hours; they should be next mixed with bread crumbs, and poured into a buttered dish for baking in the oven; the liquid should be retained, and,

if properly managed, there will be just sufficient to moisten the bread crumbs. The sugar contained in Haricot Beans is phasiomannite, identical with sugar as found in flesh-meat, and in brain tissue; in the presence of salt this develops lactic acid, as in sour milk, or meat which has been hung. It is termed "inosite," such as abounds regularly in the human brain. Unquestionably, therefore, this is a food for the brain, and should be conserved in the bean food by preventing its loss in cooking; for which reason green beans should never be boiled, but stewed, so as to retain all their immediate principles chemically available.

Dr. Krost, of Cleveland, U.S., tells about a case which troubled him much, of an elderly steamboat Captain, who had greatly exceeded with tobacco, mainly in chewing, and had been under medical treatment *in a sanatorium, for rheumatism*, but had lately suffered many a bad quarter of an hour through heart distress. Dr. Cushing, of Massachusetts, on being consulted, said, instantly, "I will give him a graft of my *Phaseolus nanus*, and if that doesn't help him I am very much mistaken." When Dr. Krost returned with the wonderful remedy, it had happened that meanwhile the old Captain had been attacked with several smothering spells, and was once given up for lost. The Doctor hurried to his side with the nostrum, and became astonished to find that within a few hours the sick man was able to get about again comfortably, declaring that he could now "lie on either side" (like an expert attorney). And what was this *Phaseolus nanus?* Dr. Cushing had been experimenting as to the medicinal effects of the common white kidney Bean. In his trial with it on himself, he had become nearly suffocated, and his heart gave him all forms of anxiety. These were the leading symptoms, upon the strength of which some pellets prepared from the said Bean were administered thus successfully to the Captain.

A dish of dry Beans, soaked overnight, then boiled, and served with hot olive oil poured over them, is the regular main meal of many a poor family in Southern Italy. Our *English Cottager* teaches to "gather your runner Beans whilst they be straight," which is an old piece of rustic wisdom, founded on the fact learnt by experience, that as the pods become large, and old, they grow curly in shape, and tough. Beans, when bruised, and boiled with garlic, have been known to cure obstinate coughs which had defied other remedies. In *Adam Bede*, by George Eliot, we read of Alec eating broad Beans with his penknife, and finding

in them a flavour that he would not exchange for the finest pineapple About Shropshire "blanks and prizes" are beans and bacon boiled together, and chopped up in union, being also called "blendings." Both peas and beans contain sulphur (whilst richer in mineral salts of potash, and lime than wheat, barley, or oats), and are therefore apt to provoke flatulent indigestion by the sulphuretted hydrogen gas which is engendered within the stomach, and bowels. Cayenne pepper dusted on such foods, or taken therewith in infusion as a tea, will stimulate a languid digestion, and will correct the flatulency often incidental to such a vegetable diet. In Dickens' time costers were crying, "Fine Prooshan Blues," as the very best kind of peas, all over London, and thus it came about that Sam Weller, in *Pickwick*, addressed his old father, Tony Weller, the stage-coachman, as "My Prooshan Blue" in words of endearment. Dried, or "parched" peas, as ordinarily supplied, are refractory enough, when eaten, to strain the digestive powers of an ostrich; the human stomach has to pass them on into the long-suffering intestines to be negotiated.

The Soy Bean (*Glycina soja*) is of three varieties, black, green, and white. These Beans are to be boiled, then mixed with barley, or wheat, until, through fermentation, they become covered with fungi; then brine is added, and further fermentation goes on for a couple of years. The sauce thus concocted is afterwards boiled afresh, and put, when cool, into bottles, or casks. From a nutritive point of view it is superior to any other sauce in our markets. Soy is made all over Japan, and is partaken of by the entire Japanese population, almost with every meal. In China, Soy Cheese is extensively eaten, whils various sauces, and pastes are prepared from the Beans.

"Les Soissonais sont heureux;
Les Haricots sont chez eux."

An old fable said that Soy was made from certain beetles, and Londoners have improved this to "black beetles."

"There was an old person of Troy
Whose drink was warm brandy, and soy,
Which he took from a spoon, by the light of the moon
In sight of the City of Troy."

Thus sings Edward Lear in his *Book of Nonsense* (1862), which book so delighted Ruskin with its "corollary carols, inimitable

and refreshing, and perfect in rhythm," that he admiringly declared, "I shall put him first of my hundred authors."

The common Bean is particularly rich in proteids (like animal food), and contains also much fatty matter, but very little starch; for which reason it makes an admirable substitute for bread in diabetes, a flour being prepared from it, and kneaded into loaves, or biscuits.

Lentils (the *Lens esculenta*), which are a leguminous pulse of allied nature with beans, contain but little sulphur, and therefore do not provoke flatulence as beans and peas are apt to do. The plant (*Ervum lens*) is cultivated freely in Egypt for the sake of its seeds, which grow in numerous pods, and are flat on both sides. Three kinds are sold in Great Britain—Indian, Egyptian, and German, the two former being red. In France this pulse is much eaten during Lent, and is supposed by some to give its name to the penitential season, men becoming under its subduing dietary influence "*Lenti, et lenes.*" About the year 1840 a Mr. Wharton sold the flour of Lentils (under the title of Ervalenta), which was then of a primrose colour. He failed in his enterprise, and Mr. Du Barry took up the business with success, but substituting the red Arabian Lentil for the yellow German pulse. Jacob's mess of pottage which he bartered to Esau for his birthright was, it is believed, prepared from the red Lentil; and the same food was the bread of Ezekiel. Phosphates abound in the Lentil, which are restorative, but liable to become deposited by the kidneys, together with such other earthy salts as are taken in the foods, or water; therefore lemon-juice, or orange-juice, is a desirable addition to Lentils at table. When in blossom the plant is a good source of honey for bees. To make Lentil soup, take half a pound of uncrushed Lentils, one carrot (chopped), three onions, one leek, two pounds of parsnips, an ounce of chopped parsley, pepper, salt, a dessert-spoonful of brown sugar, and three large crusts of bread. Wash, and pick the Lentils, and soak them all night; then boil them (with a little soda) in a large saucepan for three hours, press them through a colander, heat up again, and serve. The soup concocted in this way is delicious. Mr. Gibson Ward, writing to *The Times* some years ago, spoke of Lentil soup as the best potage possible, the Lentils only needing to be *washed, soaked, and boiled furiously* for three or four hours; then, if put before the epicure, without remark, this would be

eaten as a fine gravy soup. No condiments are required to flavour it.

Lentils contain of proteid food 25 per cent, with 56 per cent of starch, and 2 per cent respectively of fatty, and mineral matters. In common with peas, they are the beef of the vegetable kingdom. Peas are richer in potash, and magnesia; Lentils are richer in soda, and iron. As for pease pudding, Sir Benjamin Richardson said, "it took two whole days to cook, and two whole weeks to get rid of." But digestive flours of both peas, and lentils are now skilfully manufactured, the latter being richer in phosphates. Concerning this leguminous pulse, writes Henry Ryecroft (1903): "I hate with a bitter hatred the names of lentils, and haricots, those pretentious cheats of the appetite, those tabulated humbugs, those certificated crudities, calling themselves human food. An ounce of either is equivalent to, we are told, how many pounds (?) of the best rump steak. There are not many ounces of commonsense in the brain of him who proves it, or of him who believes it. Preach, and tabulate as you will, the English palate, which is the supreme judge, rejects this farinaceous makeshift. What is the intellectual and moral state of that man who really believes that chemical analysis can be an equivalent for natural gusto? I will get more nourishment out of an inch of right Cambridge sausage, aye, out of a couple of ounces of honest tripe, than can be yielded me by half a hundredweight of the best lentils ever grown."

BEEF.

THE flesh of the ox has been long reputedly in this country the highest form of sustenance, for both the sound, and the sick. Its solid parts are composed of albumin, fat, creatin, creatinin, inosinic acid, muscular tissue, and various salts. Its chief nutriment consists in the albumin, and fibrin, for building up the solids of the body. These elements become coagulated into insoluble substance by heat, and have therefore to be of necessity excluded from liquid extracts of Beef, made to be kept, and taken hot. Raw Beef is more readily assimilated when eaten than cooked meat, because its albumin has not become hardened by heat; but there is always the risk of its then containing noxious parasites which can only be killed by cooking. If Beef, or other

animal food, is taken in excess of the digestive powers, so as to remain within the body unchanged by the gastric juices, it will soon undergo putrescence, whereby corrupt products will pass into the blood, entailing mischief. Raw Beef sandwiches may be given watchfully in cases of great debility, prostration, or bloodlessness. Likewise, sandwiches of ox tongue, gently boiled, are light, and nutritious. Animal tongues consist of soft meat-fibre permeated by fat. "Tongue?" said Mr. Weller at the shooting luncheon (in *Pickwick*); "Well: tongue's a wery good thing when it aint a woman's." Reindeer's tongues are largely imported into this country from Russia; they are snow-cured, no salt whatever being used, so that the mildness, and richness of flavour are preserved.

With regard to Beef extracts, which are legion in name, and number, it is well said that no satisfactory evidence for any belief in their having nourishing, and really restorative properties, is forthcoming. Two ounces of Liebig's Extract, for instance, can be taken at one time by a healthy man without producing any other effect than that of slight diarrhœa. And as respects the nervous system, equally unsatisfactory evidence must be confessed. There is no proof that meat extractives act as stimulants to the brain in the same way that tea, and coffee do, though it has to be allowed that they are capable of removing the effects of muscular fatigue after tiring bodily exertion. "As a matter of fact," says Dr. R. Hutchison, "the white of one egg will contain as much nutritive matter as three teaspoonfuls of any of these advertised preparations, to wit, Liebig's Extract, Bovril fluid Beef, Bovril for Invalids, Brand's Essence, Brand's Beef Bouillon, Armour's Extract, etc., etc. It is solely on the 'extractives' (which are cordials, but of no use as tissue constructors), that these several preparations have to depend. Such extractives represent only the fragments, as it were, of broken-down animal substance."

Again, in like manner concerning Beef-tea, unless this includes a solid sediment of the coagulated albuminous constituents, the nutrient value of the liquid will be *nil*. "A clear Beef-tea is a useless Beef-tea; the only, and whole claim of Beef-tea as a food rests on the presence therein of flocculent animal particles which represent albumin, and fibrin; the rest of the liquid consists merely of a solution of the extractives." Dr. Fothergill has protested that "all the bloodshed caused by the warlike

ambition of Napoleon, is as nothing compared to the myriads of persons who have sunk into their graves from a misplaced confidence in the food-value of Beef-tea!" Nevertheless, by adding to the Beef-tea the exhausted fibrous solids of the meat, care being taken to reduce these to a state of fine division, the nutritive qualities of the tea can be materially increased; so that what is termed a "whole Beef-tea" is thus beneficially produced. Ordinary Beef-tea, however well made, is only a cordial stimulant, and not a sustaining food. It may be mixed with chicken-broth (which actually does hold albuminous constituents in solution), and will then represent useful sustenance.

Beef *juices*, expressed from raw, lean meat, differ from meat extracts obtained by heat, in still containing the proteids (or prime solids) of the meat, now uncoagulated; but (says a high authority) none of these juices can be taken in a sufficiently large quantity to supply much proteid to the body. Summing up the question of the value which extractives of Beef, and of other red meats stand entitled to claim, Dr. Hutchison gives it as his dictum that "they cannot renew the tissues, or supply the body with energy, and therefore are not foods. They pass out of the body through the kidneys in the same form in which they entered it; they do not act as restorative stimulants to the heart, though they may possibly help to remove fatigue; and yet they are powerful aids to digestion by calling out a free flow of gastric juice from within the stomach, whilst their pleasant flavour serves to arouse the appetite. The only means of getting the full value of Beef in small bulk is by the use of the dried meat powders." A solution of the white of egg flavoured with sound meat-extract forms a cheap and efficient substitute for the juices of raw, lean Beef.

In South Africa, Beef is prepared to make what is known there as "biltong," which, with bread and butter, is very appetizing for invalids, and most nourishing. The Beef, when cut out in a long, tongue-shaped strip from the hind leg of an ox (from the thigh-bone to the knee-joint), is then rubbed with some salt, some brown sugar, and an ounce of saltpetre. This rubbing, and then turning, is continued daily for three days, after which time the meat is put under a press for a night; it is next dried in the wind, and then hung in the chimney until still drier, and pretty firm. When eaten it is to be cut into very thin slices, or rasped. Persons suffering from sea-sickness on

board ship have relished this "biltong" when no other delicacy would tempt them to eat. It is quite as readily assimilated as fresh meat, being generally taken uncooked.

Prime Beef, when freshly roasted, or broiled, may be almost compared to alcohol in its stimulating effects at first; indeed, De Quincey has told of a "medical student in London, for whose knowledge in his profession he (Quincey) had reason to feel great respect, who assured him that a patient in recovering from an illness had got drunk on a Beef-steak." And quite recently the *Lancet*, borrowing this idea so as to apply it further, has declared: "One can truly state that there are hundreds, and hundreds of men and women in our midst who are daily stupefying themselves with Beef, heavy, and in excess, thereby deadening their brains, paralysing their bodies, and ruining their health; young people need more of such food than those who are fully grown, but it is the adults who do all the gormandizing!"

None the less, though, are we justified in boasting triumphantly of the "Roast Beef of Old England" as pre-eminently our great national dish; and in repeating right loyally the spirited invocation of Charles Morris (Laureate, in 1785), to the "Old Beef-steak Club".—

"May beef long bless our favoured coast,
Where no despotic ruffian
Has dared a brazen bull to roast,
With men inside for stuffing!
Where never Jove, a tyrant god,
Who loves fair maids to purloin,
As a white bull the billows rode
With madam on his sirloin.
Like Britain's Island lies our steak,
—A sea of gravy round it.—
Shalots, in fragrance scattered, make
The rock-work which surrounds it:
Our Isle's best emblem here behold,
Remember ancient story;
Be, like your grandsires, just and bold;
So live and die in glory."

The first Beef-steak Club was re-organised in the winter of 1749, at the instance of Dr. Samuel Johnson, and met weekly at a famous Beef-steak house in Ivy Lane. This Club had been first formed in 1735 by Rich, the famous Harlequin; it continued to held its meetings in rooms behind the stage of the Lyceum Theatre, in London, up to 1867, when, as the roll of members had become reduced to eighteen, its doors were closed for ever. In 1869 its

effects were sold at Christie's Auction rooms. Originally George Lambert, the Scene Painter of Covent Garden Theatre, had his beef-steak broiled there over the fire in the painting room, and was sometimes joined by visitors, whose conviviality from the savoury dish led them to form the Club. In 1808, when the Covent Garden Theatre was burnt down, the Club moved its quarters, first to the Bedford Coffee House, and then back to the Lyceum stage, where it met on Saturday nights in the famous oak-panelled room, and had steaks from the great gridiron; over this were inscribed Shakespeare's words: "If it were done, when 'tis done, then 'twere well it were done quickly."

In the *Art of Cookery* (1708) we read :—

> "Good beef for men; pudding for youth and age,
> Come up to the decorum of the stage."

Also :—

> "A cauldron of Fat Beef, and stoupe of ale
> On the huzzaing mob shall more prevail
> Than if you gave them, with the nicest art,
> Ragouts of peacock's brains, or filber'd tart."

Beef and rump-steak are intimately associated with the history of the food discipline of pugilists. The famous trainer, Sir Thomas Parkyas, of Bunny Park, greatly preferred Beef-eaters to what he termed sheep-eaters, who ate mutton. On the other hand, Humphries, the pugilist, was trained by Ripshaw at first upon Beef, but made thereupon so much flesh that the Beef was changed for mutton, roast, or boiled.

The action of air upon Beef, as upon all meat which has not been cooked, or frozen, is the same as that which it exercises in the living body,—oxygen is absorbed, and carbonic acid is exhaled. Concurrently, a certain amount of *lactic acid* forms in the meat, which, during the subsequent cooking, dissolves, or softens the fibrinous parts. The flesh of an animal which has died otherwise than by being slaughtered for food, may never be safely cooked, and eaten; it was a sanitary ordinance enjoined from the time of the Levitical law by Moses to the Israelites, "Ye shall not eat of anything that dieth of itself"; though he proceeded to say (in meanness of spirit which was strange for so wise a patriarch), "Thou shalt give it unto the stranger that is within thy gates that he may eat it: or thou mayest sell it unto an alien."

Raw Beef, by some special virtue which it possesses, is a

highly useful application to a recent bruise. "Eye damaged, Sir?" asked Jingle (at the "Golden Cross" Hotel, travellers' room). "Here, Waiter: a raw Beef-steak for the gentleman's eye. Nothing like raw Beef-steak for a bruise, Sir. Cold lamp-post very good, but lamp-post inconvenient. Deuced odd standing in the open street half-an-hour with your eye against a lamp-post, eh? Very good! ha! ha!"

In the Cheetham School (of the thirteenth century) at Manchester, within the Wardens' Room, is a sideboard of beautifully carved oak; it is made from the top of a bookcase, and from the lower part of a bedstead in which the young Pretender slept. The lad who takes a visitor round shows with special delight the carving of "the cock that crows *when it smells roast Beef*," opposite to which is a Pelican; *tempore*, Charles the Second.

BEER.

(*See also* ALE *and* MALT).

BEER, which is practically Ale when brewed together with hops, is not a good beverage for persons of sedentary habits; unless taken quite moderately by such, it burdens the liver with products of starch ferment, and causes dyspeptic sluggishness. If Beer gives rise to acidity in the stomach, this may perhaps be the result of an acid fermentation in the liquor itself, especially if it has not been kept long in the cask. German Beers are fermented at a lower temperature than those made in this country, and contain more starch converted into dextrin; therefore a secondary fermentation takes place in them to a considerable extent when drunk, and produces much carbonic acid gas. The peculiar flavour of Bavarian Beers is attributed to pitch in the wood of the barrels. Lager Beer (or Stock Beer) is a light German Beer, so called because stocked for ripening before being used. It has been said to owe its soporific effects in some cases to the leeks used in its manufacture, which vegetable makes persons who partake thereof sleepy. But the *Lancet* teaches that the well-known flavour of garlic in Lager Beer is rather due to the low temperature at which this beverage is brewed.

In the New England States, unfermented "Root-Beer" is made for the women, and children, this being somewhat similar in character to the well-known "Kop's Ale" of the British Isles.

Sir Horace Walpole, writing from Newmarket, October, 1743, to Sir Horace Mann, just after his return from Italy, says "What a Paradise (after the bare, wide barns of Italian inns) did I think the hostelry at Dover when I got back; and what magnificence were the twopenny prints, salt-cellars, and boxes to hold the knives! but the *summum-bonum* was the Small Beer, and the newspaper! I bless'd my stars, and call'd it luxury!" It was Dick Swiveller who assured the small "Marchioness" slavey, (when she told him confidentially that she "once had a sip of Beer,") with much solemnity, that "Beer cannot be tasted in a sip." In *Pickwick* we read about "dog's nose" (formerly a mixed drink of spiced malt liquor) "which your Committee (of the Brick Lane Temperance Asscciation) find to be compounded of warm porter, moist sugar, gin, and nutmeg (a groan: and 'So it is!' from an elderly female)."

Again, "Ale flip" is warmed Ale, or Beer, to which sugar, cognac, or rum, and ginger, with nutmeg, have been added; this is then beaten up with some stirred, or frothed eggs (half the whites being left out), and is well mixed. The drink is known in some parts as "A yard of flannel." Pepys (*Diary*, January 4th, 1666) says: "Comes our company to dinner, served so nobly in plate, and a neat dinner, indeed, though but of seven dishes. At night to sup, and then to cards; and, last of all, to have a flaggon of Ale, and apples, drunk out of a wood cup, as a Christmas draught, which made all merry." Mulled Ale, and fettled Porter were favourite drinks up to the middle of last century for nourishing the exhausted invalid, and for stuffing a catarrh in its second stage. The mulled Ale was made by warming the liquor, sweetening it, and mixing in beaten-up eggs, and spice, particularly nutmeg. In "fettled" Porter the eggs were left out, and lemon was added. The fettler was a copper utensil, like an inverted cone, for putting on the fire to heat the drink; elsewhere this is known as a hooter (heater ?), a "skillet" (with legs), a Mother Red Cup, and a spigot. The object was to make the ingredients hot quickly, so that all the spirit of the Beer should not be evaporated. We read in recent English history that a couple of centuries ago "the country Squires brewed at home a specially strong ale which, after a mid-day dinner, stood on the table in decanters marked with the oat-plant, and was then drunk in lieu of wine." "Ale-posset" is a more modern hot cordial preparation, made with milk (half-a-pint),

a yolk of egg, half an ounce of butter, and half a pint of ale. The milk is poured hot over a slice of toast; the egg and butter are then added, and are allowed to bind, and the ale is mixed therewith whilst boiling; also sugar according to taste. For sea-sickness, if the stomach feels empty, and, still more, if dry retching occurs, bottled porter will do good, and biscuit spread with some butter on which Cayenne pepper is dusted. Also, for the sickness of pregnancy Hop tea is helpful, or a small glass of sound bitter ale two or three times in the day.

Spruce Beer, or Beer of the Norway Spruce fir, or "Sprouts Beer," is an agreeable, and wholesome beverage, very useful against scurvy, and for chronic rheumatism. It is made with the young sprouts of the black Spruce fir (*i.e.*, the leaves, and young branches), or with an essence of Spruce, boiled with sugar, or molasses, and fermented with yeast. There are two sorts of this Beer, the brown and the white, of which the latter is preferred by many as being made with white sugar instead of the dark molasses. It may be noted that the term "spruce," or "pruce," was formerly used in connection with fashionable wearing apparel, and applied allusively as to a land of cockayne, or of luxury. "He shall live in the land of spruce, milke, and honey, flowing into his mouth, sleeping." "Essence of Spruce" is made by boiling the green tops of the black Spruce fir in water, and then concentrating the decoction by further boiling without the tops. The young shoots are seen to be coated with a resinous exudation, which becomes incorporated with the boiling water. Spruce Beer may be brewed at home, by boiling black treacle with water, spices, and essence of Spruce, and letting this ferment, with, or without yeast, and then boiling it again. The said essence of Spruce is a thick liquid with a bitterish, acidulous, astringent taste, to be got from the Norway Spruce fir, the black Spruce, and perhaps other species. Fennimore Cooper has told about the Beer therefrom in his novel, beloved of adventurous school-boys, *The Last of the Mohicans:* "'Come, friend,' said Hawkeye, drawing out a keg from beneath a cover of leaves, 'try a little spruce: 'twill quicken the life in your bosom.'"

The resinous products of certain pines are of great value, and subserve important medicinal uses, as pitch, tar, turpentine, resin, etc., chiefly obtained from the *Pinus palustris*. Also from these resinous exudations there is procured pine oil, as employed in making varnishes, and colours. Again, from the

Pinus sylvestris a fixed oil is extracted chemically by distillation, which oleo-resin consists of a resinous base, and a volatile essential oil. If the "tears," or resin drops, which trickle out on the stems of pines be taken, five or six of them during the day, they will benefit chronic bronchitis, and will abate the cough of consumption. Also eight or ten drops of the pine oil given in a little milk three or four times a day will relieve chronic rheumatism. Wool saturated with some of this oil, and then dried, is made into blankets, jackets, spencers, and socks, for the use of rheumatic sufferers.

Tar (*Pix liquida*) is extracted by heat from the Scotch fir; it has been long employed by doctors both externally, and internally. Tar-water was extolled in 1747 by Bishop Berkeley (*Siris*) almost as a panacea; he gave it for scurvy, skin diseases, sores, asthma, and rheumatism. It promotes several of the bodily secretions, particularly the urine. Tar yields pyroligneous acid, oil of tar, and pitch, also guaiacol, and creosote. Syrup of tar is an officinal medicine in U.S. America, for chronic bronchitis, and winter cough. Tar ointment is highly efficacious for curing some skin eruptions; but in eczema no preparation of tar should be applied as long as the skin weeps, and is actively inflamed. Dr. Cullen met with a singular practice carried out regarding tar: A leg of mutton was put to roast, being basted during the whole process with tar instead of butter; whilst it roasted a sharp skewer was frequently thrust into the substance of the meat to let the juices run out, and with the mixture of tar and gravy found in the dripping-pan the body of the patient was anointed all over for three or four consecutive nights, the same body-linen being worn throughout all this time. The plan proved quite successful in curing obstinate lepra. The Swedes call the fir "the scorbutick tree" to this day. Tar-water is to be made by stirring a pint of tar with half a gallon of water for fifteen minutes, and then decanting it; from half a pint to a pint of this may be taken daily. Tar ointment is prepared with five parts of tar to two pounds of yellow wax. Said Mrs. Joe Gargery, in *Great Expectations* (C. Dickens), to her boy brother Pip, whom she had brought up by hand (and a hard one, too!), "You come along, and be dosed." "Some medical beast had revived tar-water in those days as a fine medicine, and Mrs. Joe always kept a supply of it in the cupboard, having a belief in its virtues correspondent to its nastiness. At the best of times

so much of this elixir was administered to me (says Pip in after life) as a choice restorative, that I was conscious of going about smelling like a new fence. On this particular morning the urgency of my case demanded a pint of the mixture, which was poured down my throat for my greater comfort while Mrs. Joe held my head under her arm, as a boot would be held in a boot-jack. Joe (her meek, big husband) got off with half a pint, but was made to swallow that (much to his disturbance as he sat slowly munching, and meditating before the fire) because he had 'had a turn.' Judging from myself, thought poor little Pip, I should say he certainly had a turn afterwards if he had had none before." Edward Fitzgerald, writing to John Allen from Boulogne (July, 1840), said: "I have just concocted two gallons of tar-water under the directions of Bishop Berkeley; it is to be bottled off this very day, after a careful skimming, and then drank by those who can, and will. It is to be tried first on my old woman; if she survives, I am to begin, and it will then gradually spread into the parish, through England, Europe, etc., as the small pebble stirs the peaceful lake." Against the foot-rot of sheep, tar is most efficacious, as the trite saying tells, "Not to lose a sheep for want of a ha'porth of tar." In chronic disease of the kidneys the removal of a patient for a residence among, or near pine woods will often prove beneficial, by reason of the terebinthinate atmosphere constantly respired. A diet consisting mainly of skim milk, butter milk, and whey, will give material assistance to this cure by saving the kidneys from hard excretory work.

Porter was so called either because it was a favourite drink with the London porters, or in allusion to its strength, and substance for giving bodily support. It is made either partially, or wholly of high-dried malt, which by its solution therein materially aids the conversion into fattening dextrin, and sugar, of starchy foods taken at the same time, as, for example, bread and cheese. An excess of this malt leads to large unwieldy bodily bulk, such as that seen commonly in brewers' draymen. Stout is strong Ale, or Beer of any sort; hence, since the introduction of Porter, when of extra strength the brew was termed Stout, such as Dublin Stout, etc. Bottled Stout is an admirable soporific. "If it be desired to avoid nervous disquietude, and to banish insomnia, shun tea, or coffee, and drink Guinness' Stout. I scarcely ever met with a man

who could resist the soporific effects of bottled Stout: they are far better than those of opium, and have been ascribed to the hop resin." Temperance advocates largely patronize the drink which is now widely known as Kop's Ale, about the freedom of which from alcohol doubts are often expressed. But just lately this beverage has been carefully, and authoritatively tested, with the result that only ·25 per cent of alcohol revealed itself,—an inappreciable quantity, less indeed than is contained in an ordinary loaf of bread. The beverage is bright, clear, well aerated, and of excellent flavour, tasting precisely the same as any light bitter ale which contains alcohol, and keeping for some considerable time without its alcohol increasing by further fermentation, or the quality, and potability deteriorating. It may be thoroughly commended for all who desire a palatable, refreshing, and safe summer drink.

Thackeray said about a character in *The Newcomes*, "She thinks small beer of painters! Well! we don't think small beer of ourselves, my noble friend!"

BEET ROOT.

The Beet of our kitchen gardens is of the Goosefoot tribe, and derived from the Sea Beet, which grows plentifully about English coasts. Its name originated through a fancied resemblance borne by its seed vessels, when swollen with seed, to the Greek letter B. Therefore,

> "The Greeks gave its name to the Beet from their alphabet's second letter'
> As an Attic teacher would write the same on wax with a sharp stiletto.',

The Mangel Wurzel, also a variety of Beet, means literally, "Scarcity root."

Occasionally the leaves of the Sea Beet (which is slender-rooted) are cooked as "greens" for the table. Beet root contains a large amount of cane sugar, especially in the large white "Sugar beet," from the roots of which plant Beet-root sugar is extensively manufactured in France, Germany, and some other countries. The ordinary red garden Beet root contains nearly as much sugar as the Sugar beet; but in the process of cooking for table, a considerable quantity of this soluble sugar is lost, so that the garden Beet when boiled does not contain more sugar than three per cent; but its root is

richer in cellulose than most other tubers. An addition of vinegar to slices of red Beet root softens the fibrous tissue, and increases its digestibility; but it does not interfere with the cane sugar which is abundantly present. To persons of a certain age Beet root boiled is very indigestible, or rather they do not digest it at all. It is not the sugar pulp which thus proves a difficulty, but the porous network which resists the action of the gastric juice. Therefore, when the root is reduced to a purée, almost any person may eat it, though in the process of cooking much of the sugar is sacrificed.

This root is helpful against some derangements of the womb's functions; whilst the white Beet is laxative, and will stimulate an increased flow of urine. Though Beet-root sugar, and cane sugar, are chemically identical when pure (which they never are), yet commercially, and for culinary flavour, they differ in two important respects. First, the Beet sugar contains more extractives in the form of alkaline carbonates, many of these having a powerful, and characteristic taste which cannot be dispelled; and therefore it is that an infusion of tea, when sweetened with beet sugar containing such alkaline carbonates, is not in character, and flavour the same beverage as that made with a sugar free from this admixture. A like effect is found in coffee, and in several other sweetened drinks. Next, Beet-root molasses contains more extractives than cane molasses, and its ash gives more of the oxides of soda and potash; so that cane sugar is on the whole a superior article to Beet-root sugar.

The Beet is characterized by a large percentage of sugar, mucilage, starch, and alkaline salts, especially of soda. A pleasant wine may be made from the roots; and the juice thereof when applied to the skin of the face is an excellent cosmetic. Sometimes the root bears the name of Betterave. Baked beets are capital for the table. A Russian dinner generally begins with Bortch, which is the national soup, and the Russian is as proud of it as is the Englishman of roast beef. This is of a deep red colour, being made from Beet root, but having a "stock of treasures hidden in its depths; onions, perhaps, are swimming on the top, and beneath the surface tomatoes are not improbably concealed, with—at the bottom—a chop, succulent as a young chicken; while as an additional zest the waiter brings a tureen which contains sour cream, to be eaten with the soup." It is quite possible to make a whole meal of "bortch" soup, with

vegetables, and meat in it ; or this is therefore much liked as a first course at dinner on a Saint's day, after a rigorous fast. For Bortch soup "Bake four beets ; peel, slice, and put into good stock ; boil for half an hour. Rub down three raw beets with about one tablespoonful of vinegar, and a little water ; pass all through a sieve ; when ready to serve add one glass of Madeira wine, with cayenne, and salt to taste."

BILBERRY,

(*See* WHORTLEBERRY).

BIRDS, SMALL.

SUCH of our small fowl as the Blackbird, Lark, Robin, Snipe, Sparrow, Thrush, and Woodcock, whilst good for the table, exercise severally certain medicinal effects which are available for curative uses. The Blackbird (*Merula nigretta*) is said to increase melancholy if its flesh be eaten at all freely. Against depression of the spirits it was prescribed for occasional use by the Salernitan school of physicians. Cardinal Fesch at Lyons had blackbirds sent from Corsica, and used to say that to eat them was like swallowing Paradise : also, that the smell alone of his blackbirds was enough to revivify half the defunct in his diocese. As a great devourer of snails, this bird possesses properties beneficial for consumptive persons. The Lark is so adored by English folk for its sweet song, trilled forth as it soars high in the blue heavens, that to talk of eating this melodious bird seems at first a sacrilege. But in the south of Europe larks are such a nuisance at certain times that they have to be killed in numbers, so as to reduce the damage which they inflict on agriculture. Some persons have alleged that it is not the skylark which is served for eating—particularly in France—when on spits, or stuffed with *foie gras*, since the word *alouette* (a skylark) never appears on a French *menu*. So far as Paris is concerned, these little birds, which are offered by thousands in the markets, being almost always displayed for sale on wooden skewers, and already plucked, are commonly called *mauviettes* by both vendors, and buyers. But in the French language the lark remains an *alouette* until it is plucked, trussed, and ready to be spitted, when it becomes a *mauviette*. Moreover, in *La Cuisiniere Bourgeoise*, or general French Cookery Book, recipes

are given for *alouettes*, *rôties*, or *en salmis*, or *aux fines herbes*. "The flesh," said former physicians, "helps the cholick, and is good against the falling sickness; larks breed thrice in the year, and are themselves much troubled with the epilepsie." "The lark," tells old Fuller, "is wholesome when dead, then filling the stomack with meat as formerly the ear with musick. If men would imitate the early rising of this bird it would conduce much unto their healthfulness." The great Dr. Johnson often spoke roughly to Mrs. Thrale, and others. One day when she was lamenting the loss of a first cousin killed in America, he said, "Madam, it would give *you* very little concern if all your relations were spitted like these larks (which they were then eating) and roasted for Presto's supper" (the lapdog, who lay under the table at the time).

For broiled larks. pick, and clean a dozen larks, cut off their heads and legs, truss them firmly, rub them over with beaten egg, and strew bread-crumbs about them, with a pinch of salt; broil them over a clear fire, and serve them on toasted bread.

Again, with respect to the Robin Redbreast, we do our best in this country to protect him from harm, and to regard him with an esteem which is well-nigh religious. But abroad the brave, homely little bird fails to meet with any such appreciation. *La rouge gorge est la triste preuve de cette verité; que le gourmand est par essence un être inhumain, et cruel. Car il n'a aucune pitié de le charmant petit oiseau de passage que sa gentilesse, et sa familiarité confiante devraient mettre à l'abri de nos atteintes; mais s'il fallait avoir compassion de tout le monde on ne mangerait personne; et, commiseration à part, il faut convenir que le rouge gorge, qui tient un rang distingué dans la classe de becs figues, est un roti très succulent. Cet aimable oiseau se manga à la broche, et en salmi.* It is remarkable for a delicate bitter flavour. In Lousiana, likewise, no scruples are known about eating the Robin; after he has gorged on holly-berries, and become half-tipsy on those of the China tree, which grows there around the dwelling-houses, he is easily shot from the "galleries" (as the verandahs are called), and then he is broiled like a quail, or put into a savoury pie. A French Abbé writes about the Rouge Gorge as "*presque meprisée dans toutes les contrées qu'elle habité*"; even its popular name "*La Gadille*" adds to the ridicule attached to its sad existence.

"Who killed Cock Robin?"
"I," said the Sparrow, "with my bow and arrow,
I killed Cock Robin."

"Who saw him die?"
"I," said the Fly, "with my little eye,
I saw him die."

"Who caught his blood?"
"I," said the Fish, "with my little dish,
I caught his blood."

"Qui a tué Rouge-Gorge?"
"Moi, dit le Moineau, "avec mon arc, et ma flêche,
J'ai tué Rouge-Gorge."

"Qui l'a vu mourir?"
"Moi," dit la Mouche, "avec mon petit œil,
Je l'ai vu mourir."

"Qui a recueilli son sang?"
"Moi," dit le Poisson, avec mon petit plat,
J'ai recueilli son sang."

It is a bird most easily snared, and has been eaten by scores, though a noted Englishman declared in Italy that he would as soon devour a baby as a Robin. Being a brave, fearless, and highly sociable little creature, it may possibly confer this same estimable character when eaten habitually, even though under protest.

The Snipe (*Scolopax gallinago*), and the Woodcock (*Scolopax rustica*), live chiefly by suction, and therefore contain within themselves, when killed, nothing corruptible; so that they may be eaten, trail and all, their flavour being delicate, whilst rich. (*See* "Game.") An old French quatrain runs thus:—

"Le becasseau est de fort bon manger,
Duquel la chair resueille l'appetet:
Il est oyseau passager, et petit,
Et par sou goust fait des vins bien juger."

The Starling is "one of the worst birds to be eaten that is, for she will eat bitter; but, only keep them alive, one of the best birds that is to talk, or whistle." There are the Field Starling, and the House Starling (which breeds in churches, and houses).

The Thrush (*Turdus musicus*) has a flesh excellent for the invalid. Horace, the Latin Poet, formerly declared "*Nil melius turdo*"; and, later on, in the *London Pharmacopœia*, it is said: "The Thrush is of good nourishment, hotter in its flesh than the Blackbird, and preferred by many. Roasted with myrtle berries it helps the dysentery, and other fluxes of the belly." Thrushes are best for eating towards the end of November, because their meat is then aromatic through the juniper berries on which these birds have been feeding. Moreover, the Missel Thrush affords anti-epileptic food, because of living chiefly on mistletoe berries, which are of singular virtue against the falling

sickness; it also eats ivy berries; but the Song Thrush devours insects for the most part, being thus carnivorous. "*Soûl comme une grive*" is a well-known French proverb, "Drunk as a Thrush," because the greedy, fat birds fill their crops with ripe juniper berries until they are too lazy to fly.

As related in the *British Medical Journal* (1880), "No less exalted a personage than the Princess Bismarck lately reported the Magpie, by its flesh dried, and powdered, to be an infallible cure for epilepsy, insomuch that Her Highness issued a circular to the members of the Eckenfoerd Shooting Association desiring them to furnish before a certain day as many Magpies as possible, from the burnt remains of which an anti-epileptic powder might be manufactured." In the *London Pharmacopœia* (1696) it was stated: "The flesh eaten helps dimness of sight, vertigo, epilepsies, melancholy, and madness."

BISCUITS.

As is commonly known, Biscuits are multiform, and of various manufacture. Their general name signifies "twice baked" (*bis cuits*, or *cocti*), whilst they consist chiefly of flour, with water, or milk, and salt, or sugar, being baked in thin, flat cakes. When simply made, and newly baked, they are light, and easy of digestion, affording animal warmth, and fat, rather than structural support. "I am fearfully hot, and thirsty," said Alice (*Through the Looking-glass*), after running with the Red Queen so exceedingly fast that she found herself sitting on the ground breathless, and giddy. "I know what you'd like," said the Queen good-naturedly, taking a little box out of her pocket; "have a Biscuit!" So Alice took one, and ate it as well as she could, but it was *very* dry, and she thought she had never been so nearly choked in all her life. "Have another Biscuit," said the Queen, presently. "No, thank you," said Alice, "one's quite enough." In France, and Germany our Sponge Cake, or Savoy Cake, is known as Biscuit. The word Biscuit (*bis cuit*, twice baked) implied the process by which this form of food was made down to within the nineteenth century.

Baking powders, now much in vogue, are essentially composed of bicarbonate of potash, and cream of tartar (bitartrate of potash) in a proportion to neutralize one another; the combination forms tartrate of potash and soda, (Rochelle salt, mildly

purgative). Two teaspoonfuls of such a baking powder mixed in a quart of flour, represent forty-five more grains of the Rochelle salt than are contained in an ordinary Seidlitz powder. Alum instead of cream of tartar is quite objectionable: it would form sulphate of soda, and would make the phosphates of the flour insoluble.

In the early part of the nineteenth century, when Dr. Abernethy, a physician famous for his successful treatment of indigestion, lived in Bloomsbury Square, London, a baker named Hill carried on his business in Southampton Row, which street runs out of that Square. It was customary for the Doctor to pay this baker a morning call for a Captain's Biscuit. On one of such visits the Doctor said, "Hill, I think the biscuits would be better with some sugar in them." Hill followed the Doctor's suggestion; and, when he came again the Doctor, on tasting them, said, "They are all right so far, but put a few caraway seeds in the next batch, so as to break the wind on the stomach; and I will recommend them." Such is the history of the Abernethy Biscuit as received sixty years ago from S. Haddon, a baker who lived at the corner of William and Munster Streets, Regent's Park, and who had previously worked for Hill. Here is the original mixture used by Hill: "Seven pounds of winter wheat flour, eight ounces of granulated sugar, eight ounces of butter, and a few Caraway seeds. Mix, or rub the butter well into the flour, making a bay in the centre; add the sugar, and seeds, mixing all well together; then break until the dough is clear, and smooth. After having done this, about ten Biscuits to the pound may be cut, moulded, and pinned on a crimping board, then baked in a sound oven, and, when taken out, put in the drying oven for four, or more hours." These were genuine; but the Abernethy Biscuits now usually sold as such are spurious, and somewhat similar to the unleavened bread told about in the Bible, to prepare which the children of Israel baked their broken grain after soaking it in water, not using any substance for making the bread light, or raised. Mr. Solomon Pell, the confidential adviser of Tony Weller, and Sam, about family matters, was found at the Insolvent Court regaling himself, as business was slack, on an Abernethy Biscuit, and a saveloy.

When Lord Roberts first went out to South Africa he took with him a good supply of Bath Oliver Biscuits (excellent against indigestion); and he sent for another supply

by Lady Roberts when she rejoined him. This Biscuit owed its name to Dr. Oliver, a famous physician of Bath, the friend of Pope, Warburton, and other eighteenth century notabilities. When on his deathbed (1749) the doctor called for his coachman, and gave him the recipe for such Biscuits, also ten sacks of flour, and a hundred sovereigns. The fortunate fellow started a shop, whereat the Biscuits were made, and sold, in Green Street, Bath; and there they are still made, and sold to the present day. To manufacture these Biscuits: Put two ounces of fresh butter into a saucepan, with a quarter of a pint of milk, and stir over a gentle fire until the butter is melted; add a pinch of salt, and a dessertspoonful of yeast; then mix-in very smoothly three-quarters of a pound of fine flour; knead the mixture well, wrap it in a warmed cloth, put it into a bowl and place it on a warm hearth for a quarter of an hour. Roll it out eight or nine times, leaving it at last a quarter-of-an-inch thick. Stamp it into Biscuits with an ordinary cutter; prick them well with a fork, and bake them upon tins in a moderate oven until the Biscuits are lightly browned, say, for about half-an-hour.

For Macaroon Biscuits, *see* "Almonds." A Bavarian recipe orders, to blanch, and chop fine half a pound of sweet almonds; then beat the whites of three eggs to a stiff froth; add half a pound of white sugar, and next the chopped nuts. Drop the macaroons from a small spoon on to paraffin paper, upon a baking sheet, and bake a delicate brown in a moderately hot oven.

BLACKBERRY.

The Bramble, or Blackberry Shrub (*Rubus fruticosus*), which grows in almost every English hedgerow, is familiar to us all. Its popular fruit, ripe in the late summer, furnishes citric, and malic acids, pectin, and albumin. In 1696 doctors declared the ripe berries of the bramble to be a great cordial, and to contain a notable restorative spirit. With the ancient Greeks Blackberries were a common remedy for gout. Blackberry jam, and Blackberry wine are taken nowadays for sore throat in many a rustic English home, whilst Blackberry jelly is esteemed useful against a feeble circulation, and dropsy therefrom. This fruit goes, in some Scotch districts, by the name of "bumble-kites," from "bumble," the cry of the bittern, and "kyte,"

a Scotch word for belly; "the title *bumble-kite* being applied," says Dr. Prior, "from the rumbling, and bumbling caused in the bellies of children who eat the fruit too greedily."

But the Blackberry has also acquired the name of Scaldberry, from producing, as some say, the eruption known as scald-head in children who eat the fruit to excess; or, as others suppose, from the curative effects of the berries in this malady of the scalp; or, again, from the remedial good produced by applying the leaves externally to scalds. The French name for Blackberries is *Mûres sauvages*, or *Mûres de haie*. Tom Hood, in his comic way, has described a negro funeral as "going a black-burying." The fruit, if gathered whilst nicely ripe (before Old Michaelmas Day, October 11th, when the devil is supposed to spit on them), and dried in a slow oven, being then reduced to powder, will prove efficacious by their tannin for curing dysentery, or continued diarrhœa, more so than astringent drugs. This powder must be kept dry in a well-corked bottle.

"Where?" asks Laura Matildas Dirge, in the *Rejected Addresses of Horace and James Smith* (1812):—

"Where is Cupid's *crimson motion*,
Billowy ecstasy of woe?
Bear me straight, meandering ocean
Where the stagnant waters flow."

"Oh, ubi purpurei motus puer alitis? O, qui
Me mihi turbineis surrepis, angor, aquis?
Duc labyrintheum, duc me mare tramite recto
Quo rapidi fontes, pigra, caterve ruunt."

Australia produces the Blackberry bush more luxuriantly than any other part of the world: indeed, it is well nigh a pest in some parts, though the fruit which grows thereon is of the most luscious nature. Round about Sydney it is largely gathered, and made into jam, and jelly. For Blackberry wine, which is a reliable astringent cordial, measure your berries, and bruise them; then to every gallon of the fruit add a quart of boiling water. Let the mixture stand for twenty-four hours, being occasionally stirred; next strain off the liquid, adding to every gallon a couple of pounds of refined sugar, and keep it in a cask, tightly corked, until the following October, when it will be ripe and rich. "It's my own wine," said Armorel of Lyonesse (Besant); "I made it myself last year of ripe Blackberries." "Wine of Samson," answered Roland Lee, "the glorious vintage of the Blackberry; in pies, and jam-pots I know him, but not

as yet in decanters. Thank you! thank you!" He held the glass to the light, smelt it, rolled it gently round in the glass, and then tasted it. "Sweet," he said critically, "and strong: clings to the palate: a liqueur wine! a curious wine!" Then he drank it up.

Other home-made sweet Wines are almost equally delicious, and singularly wholesome, containing but little spirit, and each possessing the herbal virtues of the fruit, or flowers, from which it is made. "Perhaps you'd like to spend a couple of shillings, or so in a bottle of Currant wine bye-and-bye up in the bedroom," said Steerforth to little David Copperfield, when newly come to Salem House School; "you belong to my bedroom, I find."

So, respecting British Raisin wine (which is luscious, and slightly laxative), C. S. Calverley relates, touching the fair Julia Goodchild, when he was a frisky pupil at Dr. Crabb's Boarding School:—

> "With me she danced till drowsily her eyes began to blink;
> When I brought her Raisin wine, and said, 'Drink, pretty creature; Drink!'"

It was the opinion of Charles Dickens that the proper place for Champagne is not at the dinner-table, but at the dance, where "it takes its fitting rank, and position, among feathers, gauze, lace, embroidery, ribbons, white satin shoes, and Eau de Cologne; for Champagne is simply one of the elegant extras of life."

A fermented liquor may be made also from the sap of the Birch tree (*Betula alba*) in the Spring time, this being collected throughout the mountains, and wooded districts of Germany, and Scandinavia. It is possessed of diuretic properties, and is antiscorbutic, being especially commended for modifying the symptoms of diabetes mellitus. Birch bark yields an oil which is used for giving to Russia leather its peculiar pleasant odour. In the treatment of various chronic maladies the leaves, the sap, and the oil of this tree are employed. The West Indian Birch, or "gumbo-lumbo," furnishes a kind of gum-elemi, which is beneficial in the treatment of gout. The traditional use of a Birch-rod is known to us all from our youth upwards. Hood bore witness to its tender mercies at Clapham Academy:—

> "There I was birched, there I was bred,
> There, like a little Adam fed
> From learning's woeful tree."

In Chaucer's time "Gon a blackberyed" seems to have been

a humorous expression signifying "Gone to pot," or "Gone to ruin." "Though that her soul's gon' a blackeberyed" (*Pardner's Tale*). Jelly, or jam made from the Brambleberry, and taken on bread in the place of butter, was highly commended against red gravel by Mr. Pott, a noted surgeon, two centuries ago. Dr. Franklin, who suffered long from stone in the bladder, has recorded his assurance that Blackberry jam, of which he consumed large quantities, certainly served to relieve him. The Anglo-Saxon name was "Bramble-apple." Gipsies say that in cooking Blackberries you cannot stew them too long. For "Blackberry Cordial" the juice should be expressed from fresh ripe fruit, putting half a pound of white sugar to each quart of this juice, together with half an ounce of powdered nutmeg, and the same of cloves (bruised); boil these together for a short time, and add a little good brandy to the mixture when cold. In Cruso's *Treasury of Easy Medicines* (1771) it is directed for old inveterate ulcers, to take a decoction of Blackberry leaves made with wine, and foment the ulcers with this whilst hot, each night and morning, which will heal them, however difficult to be cured.

BLOOD OF ANIMALS.

When Animal Blood is used in cooking: for example, in the sausages known as black puddings, the addition of several aromatic spices is necessary so as to overcome its alkaline flatness, and lack of savour. "Blood," says Dr. Thudicum, "is not capable of giving a savoury extract (to gravy), although the blood of each species of eatable animal has its particular, and distinctive flavour; that of the ox, and cow being remarkably redolent of musk." But among civilized nations the pig is the only animal of which the Blood furnishes a distinct article of food; mixed with fat, and spices, whilst enclosed in prepared intestines, this pig's blood is made into black puddings. Chemically the Blood of animals contains a considerable quantity of iron, besides albumin, fibrin, hydrogen, some traces of prussic acid, and some empyreumatic oil. The serum, or thin part of the Blood, includes sulphur. Experimentally it turns out that the blood of snails, which is colourless, contains as much iron as that of the ox, or calf, this fact going to prove that the red colour of animal Blood is not due, as is generally supposed, to the presence of iron in that fluid. The saline constituents of

Blood are phosphates of lime, and magnesium, with chlorides, sulphates, and phosphates of potash and soda. In *Pickwick*, Mr. Roker, the coarse turnkey at the Fleet Prison for debt, when showing Mr. Pickwick what were to be his wretched quarters there, turned fiercely round on him whilst he was mildly expostulating, and uttered in an excited fashion "certain unpleasant invocations concerning his own eyes, limbs, and *circulating fluids*."

Pliny tells us that the Blood of animals (and, indeed, human Blood as well) was administered in his time for curative purposes; so likewise the Blood of the ox is in medicinal vogue to-day in certain parts of the Western Hemisphere. This is because of the well-ascertained fact that iron, particularly its organic salt (hæmoglobin) as found in Blood, forms one of the most important constituents. It may be thus supplied from the pig in the culinary form of black puddings; as likewise from the ox, or sheep, if so desired. Among the Boers in South Africa dog's Blood is an established remedy for convulsions, and fits.

It is of modern discovery that in health the human liver has to receive a comparatively large allowance of iron, for carrying on the vital processes of combustion and oxidation, as its special functions. This iron is best obtained from the food, and not through any form of physic. We know that many animals, especially beasts of prey, derive their needful supply of iron exclusively from meat containing a large proportion of Blood, which is rich in organic iron. Towards overcoming the natural repugnance of a patient to drinking animal Blood for acquiring its iron remedially, some skilful foreign chemists have produced this essential product of late in a compact form, which they term "Sanguinal," as a brownish red powder consisting (as is asserted) of pure crystallized hæmoglobin, with the mineral Blood constituents, and of muscle albumin. Hypothetically it is fair to suppose that in this way the red corpuscles of a bloodless patient may be beneficially augmented.

Pepys (October 17th, 1667) observed about a Mr. Andrews who was dining with him. "What an odd, strange fancy he hath to raw meat, that he eats it with no pleasure unless the Blood run about his chops," which it did now by a leg of mutton that was not above half-boiled; but "it seems at home all his meat is dressed so, beef and all."

Practical experiments have shown that metallic iron, in

whatever form it is administered medicinally, can be recovered from the excretions, absolutely undiminished in quantity, so that evidently no particle thereof is assimilated into the system. Nevertheless, the machinery of red Blood-making is undoubtedly started afresh by giving iron, whether in food, or in physic (much more problematically). In 1902 Professor Bunge read an important paper on "Iron in Medicine" before the German Medical Congress. He advocated an increased attention to foods containing iron, as a substitute for its administration in drug-form. "Spinach," said he, "is richer in iron than yolk of egg, and yolk of egg than beef; milk is almost devoid of iron; and, as if to provide against this defect, the Blood of the infant mammal is more plentifully endowed with the essential ingredients than that of adults, thus showing that nature is always self-provident." Garden spinach (one of the "Goosefoot" order), than which no better blood-purifier grows amongst vegetables, contains iron as one of its most abundant salts; hence it is a valuable food for bloodless persons; moreover, in both salinity, and digestibility it leads the kitchen greens, its amount of salts being 2 per cent, whereby it helps to furnish red colouring matter (hæmoglobin) for the blood. In the fruit world even the apple does not afford so much iron as this vegetable, neither does the strawberry. Spinach insists on having a rich soil in which to grow, out of which it extracts a large proportion of saline matters. Its full green juice abounds in chlorophyll, insomuch that the spinach may be cooked entirely in its own fluids, and in the steam which will arise from them. This brilliant green principle of colour, elaborated from the yellow and blue rays of the sunlight, is peculiarly salubrious. Evelyn (*Acetaria*) has said, "Spinach being boil'd to a pulp, and without other water than its own moisture, is a most excellent condiment for almost all sorts of boil'd flesh, and may accompany a sick man's diet. 'Tis laxative and emollient, and therefore profitable for the aged."

Savoy, a nutritious, and wholesome companion of spinach, contains the greatest amount of vegetable oil of all this class of kitchen plants; and spinach runs the luxuriant Savoy very close in its complement of bland oil-salts, which render the juices nourishing. Quite half a pint of spinach-oil might be expressed from a hundred pounds of the vegetable, and sometimes more than this from the same quantity of Savoy.

BRAINS OF ANIMALS.

THE Brains of animals consist largely of a fatty matter containing cholesterin, and lecithin, the latter element being comparatively rich in phosphorus. Dr. Salmon (in 1696) directed that "a ram's Brain fried, and a cake made of it with sheep suet, cinnamon, and nutmeg, is good against the lethargie, and other drowsie diseases." But Dr. Yeo now admonishes that "the large percentage of fat contained in the Brains of animals renders them difficult of use as food by weak stomachs." Nevertheless, ordinarily, owing to its soft consistency, the Brain is more readily digested than any other animal part; but, unfortunately, it is very imperfectly absorbed. 43 per cent of it being voided in the excrement from the bowels. Therefore, in spite of its easy digestibility, it cannot be regarded as a valuable food for invalids. Neither, as he supposes, is it in any sense specially fitted for "making Brains." "Some persons do fancy," said Lemery (1674), as an ancient writer has told, "that rabbit's Brains weaken the memory, because this animal cannot for a moment after retain in mind the toils laid for her, and that she had just escaped; but this conjecture being founded on a weak foundation, I shall not stop here, and go about to confute it."

To blanch (calf's) Brains, put them into a basin, with some cold, well-salted water to wash them; then strain, and rinse them in two or three other waters; put them into a stewpan, with a sliced onion, a small bunch of herbs, a few black and white peppercorns, and a teaspoonful of lemon-juice; bring them to the boil, then leave them in the liquid until cold; remove the outside of the Brains, and cut up the inside white part into small dice, and use them for the table. The calf's Brain is tasteless of itself, but palatable with a white sauce, and absolutely tender; when fried it evolves a very fine osmazome flavour, superior to that of any meat, or game; but the least over-frying is destructive of this flavour. Ox Brain is not eatable. Brain substance, or its medicinal principle—"cerebrin"—got from the grey matter of calves', and sheeps' Brains, is used remedially by modern physicians against some forms of disease in the human brain. Concerning the dictum which has obtained a widespread belief as to the functions of the human brain, that "without phosphorus there is no thought," this is only true in the sense that the brain contains phosphorus as one of its constituents;

and, unless we use the brain, thought, it would seem, is unthinkable. But the fact has never been shown that an increased supply of phosphorus in the food is especially favourable to mental effort. "It comes to this on the whole," says Dr. Hutchison, "that the digestibility of a food is of far greater concern to a brain-worker than its chemical composition." Furthermore, mental work influences the amount, and nature of the food which thereby becomes needed, in a different way from muscular labour. Brain work does not appreciably increase bodily waste at all, a fact which should be realized, and acted upon as regards the daily diet. "Mark this," wrote Oliver Wendell Holmes, "that I am going to say, for it is as good as a working-man's professional advice, and costs you nothing: It is better to lose a pint of blood from your veins than to have your nerves tapped. Nobody measures your nerve-force as it runs away, nor bandages your brain and marrow after the operation." As to special Brain nutriments, they do not exist. Small, and rather frequent meals of easily-digested food make up the ideal to aim at, it being remembered that brain work is usually also sedentary work. The reduction in the diet for mental work should probably affect the starches, sweets, and fats, more than the animal foods, fish, fowl, meat, eggs, and milk.

BRANDY (*See* CORDIALS.)

BREAD.

BREAD is such an essential food in all countries that it may well be called the "Staff of Life." "*Quando deest panis tunc est cibus omnis inanis*:"—"If Bread one needs in vain one feeds." Our Bread was evolved from the Old Eastern flat-cake, which was first leavened by the Egyptians, who probably taught the Greeks how to make it. From these latter the Romans acquired the knowledge, which in due course they passed on to the conquered Britons. It is named from the verbal root "*bre owan*," to brew, in allusion to the working of the yeast as leaven, thereby setting up alcoholic fermentation, with the production of some alcohol, and carbonic acid gas, the former of which slowly evaporates. The common household loaf of our daily Bread holds its ½ per cent of alcohol.

Yeast, "levain" (*Saccharomyces cerevisiæ*), consists of fungi

growing rapidly in fermenting wort, and setting up a similar fermentation in beers, bread, and other starchy matters into which they are introduced. Yeast consists of aggregations of minute cells, each cell constituting a distinct plant. It is employed for inducing fermentation in the making of malt liquors, and of distilled spirits, being also the agent in setting up the panary fermentation of Bread, whereby the Bread-substance is rendered light, porous, and spongy by its aeration throughout. Beer yeast may be employed as an antiseptic stimulant. German yeast is the ordinary yeast, collected, drained, and pressed until nearly dry, in which condition it can be kept good for several months. Patent yeast is gathered from a wort of malt and hops, and treated in a similar way to German yeast. Leaven is called in Greek *Zymee*, a yeast. or ferment; and hence the term "zymotic" has come to express, and signify a class of diseases due to injurious ferments. There is now made a product, Levurine, as derived from the yeast of beer, possessing remarkable powers of destroying the micro-organisms which underlie boils, carbuncles, and abscesses. It is a coarse, brown powder, with a characteristic yeasty odour, and is given in doses of from one to three teaspoonfuls, in water, or milk, or in cachets. Likewise a yeast poultice is antiseptic, and a spoonful of fresh yeast is a good remedy for "furunculosis," or an outbreak of boils. These are immediately due to penetration of the skin from without by the *staphylococcus pyogenes*, and other allied micro-organisms; so that external germicides are called for; but, probably, also, there is a predisposing condition of the whole system at the time (the urine being alkaline); therefore such medicinal remedies as fresh lemon-juice, and orange-juice, will be likewise helpfully alterative.

There are certain objections to be made against using yeast for leavening Bread, because of chemical changes which follow, so that some of the flour's nourishing constituents are lost thereby. English baking powders are made exclusively of tartaric acid, with carbonate of soda, because this acid is cheaper than the superior cream of tartar (an article very commonly adulterated), which works more slowly in the baking, and leads to lighter bread; also arrowroot is mixed with the baking powder for keeping it dry, otherwise a premature chemical combination takes place between the acid and the alkali (particularly if at all meeting with damp) before the powder comes into use for

baking purposes. The products of such combination in the dough are carbonic acid gas (which lightens the Bread,) and some tartrate of soda (which is slightly laxative).

Bread laws date back in England certainly to the time of King John, from whose reign until that of Edward I. (1280) a seal had to be affixed to every loaf in order that none save those of the prescribed size should be sold. Each baker had his own trade-mark, which he was called on to duly register, so that in any case of dispute it was quite easy to trace a loaf to its maker. There were several qualities of loaves always made, the pure white, or Simnel Bread, being then, as now, that of the "Quality-folk"; a Bread somewhat less luxurious was Wastel; next came "Puffe," and "Croquet"; then Trete (or brown Bread); and finally the black Bread of rye called "all sorts." In olden days Bread was never sold on the baker's premises: it had to be taken to the regular Bread market in paniers; and the usual way of obtaining it was through the regatresses, who purchased thirteen loaves at the market for the price of twelve, and then hawked them from door to door, their profit being the sale of the odd loaf in each "baker s dozen." Brown Bread is wheaten Bread made from unbolten flour, so that the bran remains included. In the United States it is commonly called Graham Bread. Four or five hundred years ago this kind of Bread, which was then the staple food of the poorer classes, was known as "trete, or "bis, being made of meal which was only once bolted; and to this day bran is called "trete" in the "North Countree."

"The farmer has brown Bread as fresh as day,
And butter fragrant as the dew of May.
A widow has cold pye. Nurse gives you cake.
From gen'rous merchants ham, or sturgeon take."

The origin of wheat is hidden in obscurity; no other cereal will grow in so many climates as wheat, and none of the other cereals are so suitable for making Bread. Wheat grain contains everything necessary for supporting life. All the thirteen minerals, besides flesh-formers, body-warmers, and fatteners, are packed up in each little grain of the wheat; but, unfortunately, most of these nourishment factors are abstracted when the grain is ground by the miller; he leaves only the fine wheaten flour for making white Bread; nearly all the minerals are sifted out; and, in fact, little remains for the purpose of bread-making

besides starch, which only fattens, but does not restore nerve, muscle, or bone. When "milled" the outermost coat of wheat yields *bran*, *fine pollards*, *sharps*, and *middlings*, the white flour within being derived solely from the endosperm. Ordinary Bread is usually made from a mixture of "whites," and "households." "Seconds" flour yields a Bread which is richer in proteid than the "whites," but the loaf is apt to be rather dark in colour. "Hovis" flour, prepared by using superheated steam, becomes richer in proteid, and fat, than ordinary flour.

The making of Bread from wheaten flour is only possible because this contains *gluten*, a proteid, or mixture of proteids, which has the peculiar property of becoming viscid when moistened with water. If the viscid mass composed thus is blown out with interspersed gas, it has sufficient coherence to remain in the form of a sponge, or honeycomb, instead of collapsing again, and allowing the gas to escape. Most other cereals, such as barley, rice, and oatmeal, do not contain gluten, but possess other forms of proteid which fail to become viscid when wetted, and consequently Bread cannot be made out of these. When Bread is kept it becomes dry from loss of its water, also it becomes stale by the shrinking, and coming together of the wall fibres. In the cooking of Bread a little caramel (or burnt sugar) is produced. New Bread, unless thoroughly chewed, and separated by mastication, offers greater resistance to action upon it by the stomach juices than stale Bread, owing to the tendency of the new, moist dough to clog in close masses. "He that will have a cake out of the wheat must needs tarry the grinding" (*Troilus and Cressida*). Wheat grain may be used whole as a food, being soaked in water until it swells up, and bursts, and then boiled in milk, with sugar, and other ingredients, thus making the old, and very nourishing mess, formerly called *frumenty*, which is seldom seen nowadays on the farmhouse table as of yore. A quaint quondam nursery rhyme, which has an occult significance, runs to this effect:—

"Hark! Hark! the dogs do bark,
The beggars are come to town;
Some in jags, and some in rags,
And one in a velvet gown.
Some give them white bread,
Some give them brown;
Some take a long pole,
And drive them out of the town."

This disorderly episode must refer to the time when (as Alice learnt *Through the Looking-glass*) :—

"The Lion and the Unicorn
Were fighting for the crown."

Brown Bread in which raisins (stoned, and slightly chopped) are mixed, makes a nice loaf which is gently laxative. In the United States Graham Bread is made with milk, and white flour, for afternoon use, whilst for the morning Graham flour is employed, with Porto Rico molasses added. Boston brown Bread is manufactured from meal of yellow corn, Graham flour, salt, soda, sour milk, Porto Rico molasses, and butter ; it is first boiled in a covered mould, and then baked uncovered so as to form a crust. Brown Bread and cherry pudding, is the English analogue of the thick German cherry cake, eaten cold. The bran which is included in wholemeal Bread contains a considerable amount of albuminoid nourishment, as "cerealin," this being allied to the solids of milk. It is a soluble nitrogenised ferment, which has a powerful action on starch, converting it rapidly into dextrin, and other similar bodies, thereby actually malting the bread. White wheaten Bread does not contain enough of this albuminoid matter to make it a complete human food ; therefore it has been sometimes proposed, and practised, to retain the bran, grinding its silica, and cellulose into a very fine dust ; but the realization of this method has proved a failure, and has properly met with the unqualified condemnation of all scientific men. We leave the bran to the animals, which have hitherto consumed it : "Some of them, like millers' horses, are not without evil effects from the magnesium phosphate, in the bran-forming calculi within their intestines." Moreover, the husk of whole meal, when used in making Bread, is less digestible than the inner white flour of wheat, whilst the undigested particles will irritate the lining coats of the intestines when passing along. "Therefore," says Dr. King Chambers, "white Bread is generally chosen in preference by shrewd working-men who wish to make their money spent in food go as far as it can." But it must be allowed that our fine white Breads of to-day, from which all the husk is excluded, and which do not contain the lime, are less favourable for building up the bony structures than was the Bread of rye and barley which was pretty general throughout several English counties early in the nineteenth

century. "Triticumina" bread is prepared from the entire wheat grain, including its cerealin; but Dr. Hutchison, who is the best modern authority on foods, and their nutrient values, declares his belief that no dietetic salvation can be obtained by the use of whole-meal Breads. "I am no believer," he says, "in the brown-bread fallacy."

The phosphatides of cereals contain phosphorus, and nitrogen; their compounds are essential constituents of all the nuclei (or central vitality) of cells in bodily structures, and therefore they are prominent ingredients in nerve tissues. The chief restorative phosphorus-principle is known as lecithin: it is procurable from the cereals, from eggs, apples, and other food sources.

For some unhealthy conditions of the skin, with tetter, or ringworm (through a predisposition to develop its mycelium), sluggish sores, and other signs of defective nutrition, a diet consisting chiefly of whole-wheat meal, with fresh, ripe, sound fruit, and fresh, succulent vegetables, will prove curative; and at the same time some of the fixed oil expressed from the wheat germs will heal the sores by its outward application. Bread, mixed with sea-water, is now used in Philadelphia for some forms of indigestion. The finest wheat meal, when cooked with fruit, is famous against chronic constipation; but whole-wheat meal prepared as Bread by simple baking is less nutritious than fine flour similarly prepared. The roller mill has of late diminished the dietetic value of our Bread, because the finer the flour the less nutriment it affords. Furthermore, defective teeth result from a lack of grain sufficiently coarse to require some masticatory grinding. Savages usually possess magnificent molars, mainly because of their Bread, which is composed of grain roughly pounded between stones, and retaining much of the coarser parts.

Rye contains less gluten even than barley, and thus yields with leaven a heavy, close-grained Bread of darkest colour; its bran, however well ground, is never absorbed. The latest equivalent to the Pumpernickel, or black Bread of North Germany, is the English "York Night Bread," so called because it must be baked throughout a whole night. Rye grains contain a peculiar odorous substance, and make a sour-tasting, dark Bread, which is apt to cause diarrhœa with some persons; these grains are liable to the attack of a parasitic fungus, and to become "spurred," being then poisonous to the spinal cord. Bread

made of rye flour with which a small quantity of the spurred rye is included, is to be sometimes prescribed for defective spinal energy.

Alum, as "stuff," or "rocky," is mixed with the dough by bakers in general for making Bread (about two ounces to 280 pounds of dough), because it certainly improves the appearance of the Bread, whitens it, and causes the loaves to break more easily when separated from one another. Potatoes, again, are employed by bakers, under the name of "fruit," for bread-making—one peck to the sack of flour—not as an adulteration for cheapening the produce, but beneficially to assist fermentation; mashed in their skins, and with yeast added, they supply a ferment.

"How is Bread made?" asked the Red Queen of Alice (*Through the Looking Glass*). "I know," cried Alice, eagerly; "you take some flour." "Where do you pick the flower?" the White Queen asked; "in a garden, or in the hedges?" "Well: it isn't picked at all," Alice explained; "it's ground." "How many acres of ground?" said the White Queen.

The crust of Bread is shown to contain more proteid, or principal nutriment, than the crumb. Crust coffee is a light, useful drink for invalids, which resembles in colour an infusion of coffee berries, and is made by steeping well-browned, or toasted crusts of Bread in cold water. For making "Brewis," take as many crusts, and other fragments of dry Bread as will be required; put them into a basin; pour over them sufficient boiling milk to well cover them; stand a plate on top of the vessel, and leave them to soak until they have absorbed the whole of the liquid, and are perfectly tender; then mash them to a smooth paste, removing any hard bits; stir in a small lump of fresh butter; season with salt, and a squeeze of lemon-juice, and serve them hot, or cold, with a jug of butter-milk, or cream.

One Tyson, in Manchester, a while ago, achieved fame as proprietor of a house noted for hot buttered toast. It was Tyson's humour to supply for his customers only chops, steaks, Cumberland ham, hot buttered toast, and insolence. "The excellence of his ham and toast, and the badness of his manners, were Tyson's peculiar claims to remembrance. He walked about the place in his shirt sleeves, superintending proceedings, and showing rudeness to his customers. We regret to find that by these means he acquired fame, and wealth." In the *Book of Nonsense*, written by Edward Lear, London (1862),

and dedicated to "the grandchildren, grand-nephews, and grand-nieces of Edward, the thirteenth Earl of Derby," we read with amusement :—

> "There was an old man of the coast,
> Who placidly sat on a post;
> But when it was cold, he relinquished his hold,
> And called for some hot buttered toast."

This was quite a wise thing to do, seeing that the melted butter would serve admirably as fuel to quicken his bodily warmth.

At the "Marquis of Granby's" (of glorious memory) in *Pickwick*, when Sam Weller paid a visit to Mrs. Weller, his mother-in-law, "the fire was blazing brightly in the bar parlour, and a plate of hot buttered toast was gently simmering before the fire, and the red-nosed man was busily converting a large slice of bread into the same agreeable edible on a long brass toasting-fork. 'Governor in?' enquired Sam. 'He may be, or he may not,' replied Mrs. Weller, buttering another round of toast for the red-nosed man. 'Ask a blessin', Mr. Stiggins.' The red-nosed man did as he was desired, and instantly commenced on the toast with fierce voracity." Quite an important medical art is that of making proper toast for the sick person. If the slice of bread is thick, and carelessly exposed to a blazing fire, the outside is charred, and converted into charcoal before the heat can reach the inside. Thus the moisture within is only heated, not evaporated, and makes the inside doughy, or clammy; and butter, when spread upon this toast, cannot penetrate through into the interior bread, but floats upon the surface in the form of oil, and the result is one of the most indigestible of compounds. The correct way is to have the bread stale, and cut into thin uniform slices, and to dry it thoroughly before browning it. Toast of this kind, when moistened with water, or with milk, is easily, and thoroughly acted upon by the digestive glands. But when it is a chip, dry enough to snap, is too dry. A central layer of soft bread lends it unity, and preserves enough moisture to influence the whole. If the intervening bread between the two toasted surfaces is more than a mere hint, then has the toaster failed ignominiously. Such an anomaly is "like dancing in thin boots surmounted by heavy gaiters." We remember it was "a lunatic, all gas, and gaiters," who made love to Mrs. Nickleby, the loquacious mother of Nicholas.

When sugar is continuously heated, its water is driven off,

and presently the sugar grows darker and darker in colour until it is charred black, and becomes on the outside "caramel," which possesses disinfecting properties. Similarly, when bread is toasted, its starch is converted by the fire into dextrin, water being driven off, and the dextrin is carbonized, or burnt brown into "caramel," nearly identical with that of sugar. The toast, therefore, has likewise disinfecting properties, and when soaked in water makes this toast-water antiseptic, so that its administration in fever, and other septic diseases is a practically scientific proceeding. "Our forefathers and foremothers," says Mattieu Williams, "probably made this discovery through empirical experience when living in country places where stagnant water was a common beverage, and various devices were tried for making it drinkable. When toast-water is prepared by toasting a small piece of bread to blackness, and letting this float on water in a glass vessel, an observer can notice that little thread-like streams of brown liquid are descending from the bread into the water. They denote a solution of the caramel substance, which ultimately proceeds to tinge all the water. It is in just the same way that meat, or game, which is *high* before being cooked, becomes, if roasted, or baked, similarly carbonized, and browned outside, and thus made sweet."

To cook food *au gratin* means that the substance is covered with fine bread-crumb, so as to absorb the gravy thereof. "Gratins" were originally the browned parts of cooked rice. The French dishes "*au gratin*" signify soups, or sauces consolidated by dry heat round spongy objects, such as crusts of bread. When the great Duke of Wellington returned to Dover in 1814, after an absence abroad for six years, the first order he gave at the "Ship Inn" was for an unlimited supply of buttered toast. Moore's pathetic lines, (in *The Fire Worshippers*, 1839)—

"I never nursed a dear gazelle,
To glad me with its soft black eye,
But when it came to know me well,
And love me, it was sure to die,"

have been adroitly parodied thus—

"I never took a piece of toast,
Particularly long, and wide,
But fell upon the sanded floor,
And always on its buttered side."

It is aptly said, "An epicure can breakfast well with fine bread

and butter, and good coffee." Nine persons out of ten, when they call a man an epicure mean it as a sort of reproach, as one who is not content with everyday food, one whom plain fare would fail to satisfy; but Grimod de la Reyniere, the most famous *gourmet* of his day, author of *Almanach des Gourmands*, (Paris, 1812), said: "A true epicure can dine well from one dish, provided it be excellent of its kind. Yes! excellence is the object to be aimed at; if it be but potatoes and salt, let the potatoes be mealy. and the salt ground fine." Thackeray declared an epicure to be "one who never tires of brown bread, and fresh butter."

Fried Bread is a good, homely, nutritious dish. "Take slices of brown Bread, fry them a nice brown with some dripping (either of beef, mutton, or fowl), and serve warm, with pepper."

"There was a Prince of Lubberland,
A potentate of high command:
Ten thousand bakers did attend him,
Ten thousand brewers did befriend him;
These brought him kissing crusts and those
Brought him small beer before he rose."*

The Art of Cookery.

"Likewise a few rounds of buttered toast," said Mrs. Gamp, when giving her orders for her tea to Jonas Chuzzlewit's servant, "first cuttin' off the crustes in consequence of tender teeth, and not too many on 'em, which Gamp hisself, being in liquor, struck out four at one blow,—two single, and two double, as wos took by Mrs. Harris for a keepsake, and is carried in her pocket at this present hour along wi' two cramp-bones, a bit of ginger, and a grater like a blessed infant's shoe in tin, with a small heel to put the nutmeg in." "Toast and water is a friend, a sick-room ally. It is as cooling as the wind of the morning across fields of dew." Again, toast swimming in beef-tea constitutes the first solid food that a convalescent patient may take.

For Brown Bread soup, stew half a pound of brown bread-crumbs in half a pint of light beer, and half a pint of water; when these are well blended, add half a pound of brown sugar, and half a pound of stewed French plums; boil all together, and serve hot. Whipped cream will improve the soup, if suitable.

In Mrs. Gaskell's *Cranford* we read of "Bread-jelly, for which

* In imitation of Horace's Art of Poetry (*de arte Poeticâ*), by the author of *Tale of a Tub*, (W. King, 1709.) "Coquus omnia miscet" (*Juvenal*).

Mrs. Forester was famous. A present of this Bread-jelly was the highest mark of favour dear Mrs. Forester could confer. Miss Pole had once asked her for the receipt, but had met with a very decided rebuff; that lady told her she could not part with it to anyone during her life; and that after her death it was bequeathed, as her executors would find, to Miss Matty. What Miss Matilda Jenkyns might choose to do with the receipt when it came into her possession, whether to make it public, or to hand it down as a heirloom, she did not know, nor would she dictate. And a mould of this admirable, digestible, unique Bread-jelly was sent by Mrs. Forester to our poor sick conjuror. Who says the aristocracy are proud?"

In a *Choice Manual: or Rare Secrets in Physick and Chirurgery* (1653) is the following as "a good remedie against the pleurisie": "Open a white loaf in the middle (new baked), and spread it well with triacle on both the halfes on the crown side, and heat it at the fire; then lay one of the halfes on the place of the disease, and the other half on the other side of the body directly against it, and so bind them that they loose not, nor stirre, leaving them so a day and a night, or until the imposthume break, which I have sometimes seen in two hours, or lesse; then take away the Bread, and the patient will immediately begin to spit, and void the putrefaction of the imposthume; and after he hath slept a little, yee shall give him meat; and with the help of God hee shall shortly heale."

For ear-ache the country people in some districts pound up the crumb of a loaf hot from the oven, together with a small handful of bruised caraway seeds; then wetting the whole with some spirit, they apply it for a while to the painful, and swollen part.

In former English days the way to "make a Panada" was "to set on the quantity you will make in a posnet of fair water; when it boils put a mace in, and a little bit of cinnamon, and a handful of currans, and so much bread as you think meet; so boil it, and season it with salt, sugar, and rose-water; and so serve it."

Muffins consist of a dough made soft with milk, first mixed with German yeast, the white of egg being added, and the dough being put under cover before the fire to rise. When saturated with hot melted butter, the muffin needs a vigorous digestion to negotiate it. Sam Weller told to Mr. Pickwick a story which

is much to the point about a man who "killed hisself on principle," giving the doctor to know he had eaten four crumpets every night for fifteen years "on principle": "Four crumpets a night," said the doctor, "will do your business in six months." "Are you sure of that 'ere?" enquired the patient. "I'll stake my professional reputation on it," answered the doctor. "How many crumpets at a sitting do you think would polish me off?" asked the patient. "Do you think half-a-crown's worth would do it?" "I think it might," said the doctor. "Three shillings would be sure to do it, I suppose?" says the patient. "Certainly," says the doctor. "Wery good," says the patient; "Good night." Next morning he gets up, has a fire lit, orders in three shillings' worth o' crumpets, toasts 'em all, eats 'em all, and so puts an end to hisself." The crumpet resembles the spongy inside of a muffin. It much resembles a round piece of a blanket soaked in butter, and is nearly as indigestible; the slang title "sudden death" has been given to this risky comestible.

"Bread," said the Psalmist "eaten in sorrow is vain." Yet for a sick person of feeble digestive powers, and with a capricious appetite, simply-made bread-sauce, which can be most readily prepared, will often prove grateful, and nourishing, being, moreover, suggestive of game, or fowl. Take a pint of milk, a cupful of crumbled bread-crumb, a small onion, a blade of mace, a little pepper, and salt; peel, and cut the onion into quarters, and simmer them in the milk until tender, then take them out; stir the fine bread-crumbs into the boiling milk, and beat this with a fork very smoothly; add the seasoning, and butter, and a little white pepper, and give one more boil. To enrich the sauce, if desired, a spoonful of cream may be added. Time of making will be altogether only half-an-hour.

BROTHS.

It was about the year 1820 that the term Broth was for the first time given to an essential solution of meat, the strength thereof being determined by the weights of the principal ingredients used. In 1740, according to *Le Cuisinier Moderne*, an extract of meat was prepared in dry tablets "which might be easily transported, and preserved during a year, or longer." These dissolved into excellent Broth, though half their solid matter was gelatine. The

French Chemist, Chevreul, who examined this extract of meat in 1835, discovered therein the crystallized substance "creatin," and thus originated a chemical knowledge of the principles of flesh. The Germans call such an evaporated extract of the stock-pot "pocket-bouillon," and the French style it "bouillon sec." Prout surmised that the active element of sapid meat-extract is an acid, probably the "inosinic acid" of Liebig. The French School of Cookery has unanimously adopted the principle that Broth is the foundation of this art, because it is the basis of all sauces; since, according to the French system, the sauce is the prime element, if not the actual *raison d'être* of the entrée which it supplements. For extemporizing, or strengthening Broths "*Le Saveur des Potages*" (known in this country as "Maggi's Essence") is of great value, and importance. It is a highly concentrated liquid essence, which has to be as sparingly employed as though one were making up a prescription; it is therefore supplied in small bottles which have little curved spouts fitted in the neck, and thus enable the liquid to be dispensed drop by drop; the effect of a few drops on a thin Broth, or Soup is almost magical. To make therewith a good cup of Broth: Beat up the yolk of an egg in a basin previously warmed; add an eggspoonful of the said essence, and fill up the basin with boiling water, stirring well all the time. The "Maggi" may be had either plain, concentrated, or slightly flavoured with fine herbs. "French cookery," said Dumas, "owes its superiority over that of other nations only to the excellence of its bouillon." In Devonshire the peasantry make "Tay-kittle Brath" (or "sop"), its ingredients being one slice of bread cut in dice-shaped pieces, one "spit" (i.e., very small piece) of butter, one tablespoonful of milk, one pint of boiling water, with pepper and salt to taste; sometimes chopped leeks being added, when it is called "licky Brath." "I allays likes," says a Devon peasant, "tu put a vew *spits* ov butter 'pon the tap ov a rice pudden; et kep'th'n vrom burning." A West Devon farmer was invited to dinner, together with one or two other tenants, by his landlord, who noticed that Mr. Tibbs did not eat his soup (vermicelli), but stirred it backwards and forwards with the spoon, whilst a look of disgust overspread his face. The host, addressing him, said, "I fear you do not care for your soup, Mr. Tibbs; let John take your plate away." Mr. Tibbs smiled somewhat grimly, and replied, "Well, zir! I likes a dish of

licky-brath, or tay-kittle brath, ov a vrasty mornin'; but, burnish it awl! I niver cüde stomick maggity brath like this es."

Beef gives the weakest Broth; mutton Broth is a little stronger; and chicken Broth strongest of all. "Broth can be made, cold in quality, without the application of heat, by digesting half a pound of finely-minced beef with a pint of cold water to which four drops of hydrochloric acid (the basis of table-salt) have been added. The product thus furnished is richer in soluble albumin than when heat is employed. By using rather more of the same acid, but no salt, heat can be applied up to 130° F., and by this method nearly 50 per cent of the meat can be obtained in the broth." (Yeo) "About 80 per cent of the meat-salts pass into the Broth, and all the chlorides, with most of the phosphates."

Poached egg Soup (Thudicum) is a pure soup quickly procurable, and a very desirable form of nourishment for persons suffering from an irritable, or sore state of the intestinal canal, as in typhoid, or enteric fever. Prepare some standard Broth, delicately flavoured; then poach some eggs (contained in immersion-moulds) in boiling water; trim them, and transfer them to the tureen, and pour the Broth over them. Dice of toast may be added if approved.

To prepare an instantaneous Broth, or *Bouillon à la minute*, as for cases of urgent illness (the cost being then a secondary consideration), cut up one pound of very lean gravy beef, and half a boned chicken; pound these well, and put into a stewpan, with ten grains of salt; pour over the same three pints of water, and heat to the boil, while stirring; as soon as the boiling has commenced, add shredded carrots, turnips, onions, leeks, and celery; boil for twenty minutes, and pass it through a cloth. In this way the bones are omitted, fat is excluded, the meat is much subdivided, and perfectly exhausted of its juices, whilst the time of boiling is confined to twenty minutes. The saucepan must be kept covered during this boiling, else the adage may become unpleasantly verified—"He who boils his pot with chips makes his Broth smell of smoke." Chicken Broth, for women, or children, "can be rendered emollient," says Dr. Thudicum, "by boiling in it some marsh-mallow root, and barley, sweetening it with Narbonne honey; boil, skim, and filter." A remarkable Broth, or Soup is to be made from the cockroach, or blackbeetle, of kitchen familiarity, for proving beneficial against albuminuria, or what is known as Bright's disease of the kidneys. M. Dagin's

recipe orders thus: "Pound your cockroaches in a mortar, put them in a sieve, and pour over them boiling water, or hot beef-stock; this constitutes a delicious, and nutritive plât, preferable to bisque."

Plain Broths, and Soups may be poured over crusts (*croutons*) which have been prepared as follows for weakly persons needing fat, and bodily warmth, whilst the digestion is fair: "Remove the crusts from slices of stale loaves, cut into small dice, and then drop them into boiling butter; shake very gently, but thoroughly, till of a light golden brown; when done, which will be in about a minute, take them up with a skimmer, and lay them in the mouth of the oven on brown paper to dry. The butter must nearly cover the bread, and must be boiling."

Herrick mentions a quaint belief which persons formerly entertained—that it is lucky to carry a small piece of dry consecrated bread in the pocket against terrors by day or night:—

"If ye fear to be affrighted,
If ye are by chance benighted,
In your pocket for a trust
Carry nothing but a crust:
For, that holy piece of bread
Charms the danger, and the dread."

BUN.

The ordinary sweet Bun was originally "Bugne," a sort of fritter, a kind of bread made with sugar in it, and baked in cakes, generally round. The first mention of Buns occurs in a comedy of 1676; and eighteenth-century literature makes many allusions to this new form of pastry. The name "bugne" signified "a lump," and (*absit omen!*) "a bunion." Nowadays this popular comestible as a makeshift form of food is spongy, and filling at the price. A plain penny Bun is to be considered more wholesome than the spiced varieties of Bath, and Chelsea. Specially taxing to digestion is the British Museum Bun. In Devon, large, satisfying Buns, made yellow with saffron, are known as "stodgers," or "busters." Mr. Tom Ward, a baker at Tiverton, used some years ago to manufacture a batch of these Buns, very big, which he sold at one penny each; children, on going into his shop, would invariably say, "Plaize I wants a penny stodger"; or others would ask for "a penny buster." Bath Buns date back to Roman times as to both composition, and shape, the latter being that of the classic "placenta."

Formerly in England the famous Chelsea Bun house, at the corner of Jews' Row, (now Pimlico Road), was kept by a Mrs. Hands. So many persons were in the habit of flocking thither on a Good Friday for eating "hot cross Buns," that on one occasion fifty thousand assembled there, and two hundred and fifty pounds were taken in the day for these Buns only. The Royal Family, and many of the aristocracy used to frequent this house in the mornings; and Queen Charlotte even presented Mrs. Hands with a silver half-gallon mug containing five guineas. Sir Charles Phillips, writing a few years before the destruction of the Chelsea Bun house, after admitting that for thirty years he never passed the house without filling his pockets, goes on to say: "These Buns have afforded a competency, and even wealth, to four generations of the same family; and it is singular about the Buns that their delicate flavour, lightness, and richness, have never been successfully imitated." Even as late as in 1839 twenty-four thousand Buns were sold there on a Good Friday alone. In many households at the present time a Good Friday Bun is superstitiously kept for ensuring a healthy, and prosperous time until another such Bun comes to be made in the following year. Moreover, the crossed Bun is believed to protect the house from fire, whilst serving to cure diarrhœa, as well as all manner of other ailments, in men, and cattle. When used as a remedy the Bun is grated into a warm drink, or a mash, and given at night. A special virtue of this Bun, as the allegation goes, is that it will not grow mouldy like ordinary bread. Loaves of consecrated bread, each marked with a cross, were found at Herculaneum, showing that the hot cross Buns of our day had really a Pagan origin. The Romans called them "*quadra*." Earlier still, cakes dedicated by the Jewish women to Astarte, Queen of Heaven (afterwards the Roman Diana), were marked with a cross, which was the symbol of the goddess; or with horns, in allusion to the crescent moon. "In April, 1902" (*Pall Mall Gazette*), "a baker in a large way of business confessed to making a free use of the cheapest sherry in his manufacture of Good Friday Buns, also intermixing therein spices of various sorts, and small currants; but the compound proved abominably indigestible, and the idea of thus eating the Cross seemed little short of barbaric."

In South Africa, at the Cape, is compounded the delicious, and wholesome Grape Bun, "Moss Bolletje (bun)," moss being the juice

of the grape in its early stages of fermentation. This Bun is of excellent service against atrophy, and the wasting effects of consumptive disease. During the wine-making season freshly-fermented grape-juice is commonly used instead of yeast by the country-folk at Stellenbosch, French Hoek, etc, and very nice Buns are prepared therewith. Or, if grapes cannot be had, then raisins are taken, and put in a jar which is previously seasoned by having had fermenting grapes, or raisins, within it; the jar is not washed with water when about to be used, but generally dried in the sun, and kept closely covered from dust, being only employed for making the "moss" therein, so as to ensure its fermenting in a given time when thus prepared in the seasoned jar, or calabash. Again, for these Grape Buns the following is another old Dutch recipe: "A good batch": Take two pounds of raisins, sixteen pounds of flour,, three and a half pounds of sugar, eight eggs, one and a half pounds of butter, one pound of fat, two tablespoonfuls of aniseed, two grated nutmegs, one tablespoonful of finely-powdered cinnamon; cut the raisins, or mince them, put them into a jar, or calabash, with twelve cupfuls of lukewarm water, on the stove, or in the warmest part of your kitchen for twenty-four hours, till they ferment; have ready the flour, in which, after it is well mixed with the sugar, spices, etc., make a hole, and strain into it the fermented juice of the raisins; sprinkle some flour over the top, and set to rise for some hours in a warm place; then melt the butter and fat, warm the milk, whisk the eight eggs (yolks and whites separately), mix the whole well together into a stiff dough, and knead with the hand for quite three-quarters of an hour; let it stand overnight to rise; in the morning roll into Buns; set in buttered pans in a warm place; let them rise for half-an-hour; brush with the yolk of an egg, and some milk, and sugar; bake for half-an-hour in an oven heated as for bread.

BUTTER.

As everyone knows, Butter is the fatty portion of new milk. The name is probably derived from the Greek word "*Bous,*" a cow. Butter contains 80 per cent of fat, and therefore is capital food for supplying bodily warmth through its combustion in the system. It can be taken in large quantities if well mixed with starchy food, such as mashed potato; though, when made

hot, Butter develops butyric acid, which provokes indigestion with many persons. Butter, after separation from the milk by churning, and leaving the butter-milk behind, yet retains a small percentage of the casein, or curd, with some water, and a certain amount of mineral matters ; whilst this water includes a little lactic acid (derived from the milk-sugar), and traces of other constituents. By reason of the residual casein, and the water, Butter soon turns rancid, unless melted, and boiled down until the water is driven off ; if then strained through muslin, so as to remove the flakes of casein, it will, when cool, in a corked bottle, keep almost indefinitely.

The most striking chemical characteristic of Butter-fat is its richness in those fatty acids (butyric, caproic, capric, and caprylic) which are soluble in water, so that the Butter-fat approximates, by its olein, closely to the fat of the human body. As a matter of fact, Butter is the most easily digested of fatty foods, and has a magnificent record on this score, no less than 98 per cent of it being assimilated by the body ; thus going to prove that a meal of bread, fresh Butter, and sound new cheese, with lettuce, young watercress, or some such light vegetable addition, is about the most wholesome, and nutritious fare which a man can choose. Freshly-made dairy Butter can be taken freely, whilst uncooked, against chronic constipation with marked success, especially by elderly persons, or by thin persons of fairly active habits. Also against obstructive appendicitis, which has of late become so seriously common, fresh Butter (if otherwise suiting the digestion) will assist capitally to lubricate the affected portion of intestine, and to pass on crude, offending impediments, such as hardened excrement, or tough portions of meat, vegetable fibre, seeds, and the like. The human intestine (larger bowels) contains an enormous quantity of bacteria (most numerous herein), this bacterial flora constituting a third part of the human excrement. Now, so long as the microbes remain within the intestine very few of them get into the general circulation of the blood, or humours, whilst with these few the organism is able to cope. But stagnation of the intestinal excrement within its walls increases the amount of harmful *phenol* and *indol*, which are products of this intestinal flora of bacterial microbes, and which then become mischievously absorbed by the intestinal walls ; they pass on into the general circulation, and give rise to symptoms of a more or less serious

nature. For which reason the salutary effects wrought by good Butter, and similar animal fats, in oiling the intestinal machinery for its better, and easier working, is made manifest.

Thomas Parr, the "olde, olde, very olde man," who lived to the authenticated age of one hundred and fifty-two years, in Shropshire, and then died through a change of foods when invited to stay with the Earl of Arundel (in 1635), has been described respecting his methods for longevity, by John Taylor, the Water Poet, in lines written a month before Parr's death :—

"He was of old Pythagoras' opinion
That green cheese is most wholesome with an onion :
His physic was good butter, which the soil
Of Salop yields, more sweet than candy oil ;
And garlick he esteemed above the rate
Of Venice treacle, or best mithridate.
Coarse **meslin* bread ; and for his daily swig
Milk, butter-milk, and water, whey, and whig :
Sometimes metheglin, and by fortune happy
He sometimes sipped a cup of ale most nappy.
He entertained no gout ; no ache he felt ;
The air was good, and temperate where he dwelt."

Butter-makers have recently learnt to regard as friends those special microbes, without the presence of which the cream does not become sour. All good Butter is churned from cream which has been allowed to stand for this purpose a certain number of hours, partly because soured cream yields more butter than fresh cream, but chiefly because the flavour of the Butter is improved in this way. It is now believed that better flavours can be produced by certain bacteria over those of others, and therefore these higher-class bacteria are purposely put into cultivation. Also the quality of Butter depends intimately on the breed of cows from which the milk is got, as well as on the nature of their food ; and its degree of excellence becomes determined by the place where it is grown, and the mode of its preparation. This influence of the food was expressed by the rustic writers of Rome, in the saying, "*Pabuli sapor apparet in lacte*"—"By the milk we discover what has been the cow's fodder." Of the prejudicial flavours imparted to milk by food containing wild plants of the garlic tribe, and other such vegetables as generate sulphuretted hydrogen through their essential oils, only small portions are

* Meslin bread, or *Mashlum*, was made of a mixture of several kinds of flour.

retained by the Butter. Cabbages, and turnips are more subject to this imputation, but their unwelcome odours can be made to volatilize.

The most useful varieties of Butter next to the English are Irish, Dutch, Holstein, Swiss, Norman, and that from the Channel Islands. Butter was first used as a food by the Hebrews. The early Greeks and Romans employed it as a medicine, or ointment. Perfumed Butter has been a recent fad in the refined! homes of New York. Pats of Butter are wrapped in muslin, and laid in glass dishes on beds of roses, violets, and carnations, with other blossoms heaped over them, so that the Butter becomes impregnated with the various flower odours. The Mad Hatter, "*Alice in Wonderland*," took his watch out of his pocket on being asked by Alice what day of the month it was. "Two days wrong!" sighed the Hatter; "I told you Butter wouldn't suit the works." "But it was the best Butter," meekly replied the March Hare.

Again, thus sang the "aged, aged man in a song of his own invention":—

"I sometimes dig for buttered rolls,
Or set limed twigs for crabs.
I sometimes search the grassy knolls
For wheels of hansom cabs.
And that's the way (he gave a wink)
By which I get my wealth;
And very gladly will I drink
Your honour's noble health."

What is called by the cook "clarified" Butter, which is merely melted into a yellow, clear, oily liquid, such as is served at some tables with asparagus, will, more often than not, ferment in the stomach, especially if animal food be eaten therewith so as to stimulate a flow of acid gastric juice. Among the Jews an established rule obtains forbidding Butter to be eaten until some considerable time after a meal of animal food. Nevertheless, in the grim kitchen of old Fagin, the Jew, buttered toast was greedily demanded by Noah Claypole at breakfast as part price for playing the spy upon Nancy (*Oliver Twist*, by Charles Dickens, 1838). It was Ebenezer Elliott, the Corn-law Rhymer, of Sheffield (1831)—("a voice" said Carlyle "from the deep Cyclopean forges;")—who in his early days "had to rock the cradle, and stir the melted butter," with the result that "the poetry was spoilt, and the melted butter burnt."

Bread-and-Butter is the reputed food of adolescence. "She's but a bread-and-butter Miss." Anthony Trollope, in *Barchester Towers*, talks of the "wishy-washy bread and butter period of life." "Crawling at your feet," said the Gnat to Alice (*Through the Looking Glass*), "you may observe a Bread and Butter Fly; its wings are thin slices of bread and butter, its body is crust, and its head is a lump of sugar; it lives on weak tea, with cream in it."—

> "The fav'rite child that just begins to prattle,
> And throws away his silver bells, and rattle,
> Is very humoursome, and makes great clutter!
> Unless appeased with frequent bread and butter."

A curious piece of folk-lore finds credence in South Maryland. It is gravely stated there, that if the mother of twin children will spread with Butter a piece of bread for a boy, or girl suffering from whooping cough, the little one, on eating this specially endowed food, will be speedily cured. Two sons of the State Governor's wife are twins, and recently various anxious mothers have been appealing to the lady of the Executive Mansion, both in season and out of season, for her good offices in this direction. No social function is too important for the applicants to forego their importunities. The doorkeeper is continually bringing in solicitations for pieces of bread buttered by the said lady. She is too kind-hearted to refuse; so the Governor's wife, after the fashion of Charlotte in Thackeray's version of the Sorrows of Werther:—

> "Like a well-conducted person
> Goes on cutting bread and butter."

Not a few invalids of sensitive digestion find they cannot eat ordinary shop Butter without subsequent disturbance of the liver; and the probable reason is that microbes have become developed therein, or their mischievous toxins are engendered; whereas the same delicate persons can eat a fair quantity of the day's dairy Butter, absolutely fresh, without incurring a disturbed digestion some eight or ten hours afterwards.

Professor Koch, of Berlin, has sagaciously told people, as a point worthy of thoughtful notice, that whilst being so nervous about milk, they forget Butter, in which bacilli (of fever, consumption, and other diseases) are equally likely to be nurtured. Nevertheless, so commonly given to the consumption of bread and

butter are the children of the English working-man, that it has been well said this refection goes on daily upon ten thousand London doorsteps. A pithy old English proverb puts it: "When the cook and the maid fall out, we shall know what has become of the butter!" It was Charles Lamb who pronounced about Munden, the Actor: "His gusto antiquates, and ennobles what it touches; his pots and his ladles are as grand and primal as the seething pots and hooks, seen in old prophetic vision. A tub of butter contemplated by him amounts to a Platonic idea. He understands a leg of mutton in its quiddity. He stands wondering amid the commonplace materials of life, like primeval man with the sun, and stars about him."

CABBAGE.

"THE time has come," as said the Walrus (*Alice and the Looking Glass*):—

> "To talk of many things;
> Of shoes, and ships, and sealing wax; of *Cabbages*, and kings."

Because apt to ferment, the whole tribe of Cabbages, or Coleworts, is named botanically *Brassicaceæ*, "*apo tou brassein.*" They all contain much nitrogen, or vegetable albumin, with a considerable quantity of sulphur, which latter constituent makes them admirably antiseptic; nevertheless, they tend strongly to putrefaction, and when undergoing this process they give off very offensive odours. The white Cabbage is most putrescible, the red most emollient, and pectoral. All the Coleworts are called "Crambe," from *krambos*, dry, because they dispel drunkenness. A Greek proverb said, "*Dis crambee thanatos*," signifying the phrase, "Death by twice Cabbage"; "the single portion is excellent, the double dish is death;" or, as the Latin maxim of Juvenal renders it, "*Occidit miseros bis repetita.*" Most probably the real intention of these warnings was, as old Fuller thought, "*Crambe bis cocta.*" "Colewort twice sodden" (meaning likewise "stale news") conveys the fact that "Crambe is a kind of Cabbage which, with vinegar, being raw, is good, boiled better, but twice boiled, noysome to the palate, and nauseous to the stomach." Athenian doctors prescribed cabbage for young nursing mothers who wished to see their babes grow lusty, and strong. "Honest old Cato," wrote Culpeper, (1650),

"used no other physick than the Cabbage." "Cato, the Censor, with his strong sense, and his hard-headedness, may probably be taken as the representative of the best household mediciner known to the Romans in their brave days of old. His system of therapeutics was as simple as that of Sangrado, only he used Cabbage instead of water. This homely vegetable was to Cato a veritable panacea; given internally, or applied externally, it was '*ad omnes res salubris*.' It cured constipation, and dysentery, headache, and lumbago; retention, and incontinence of urine; pains in the liver, and affections of the heart, colic, toothache, gout, and deafness, insomnia, ophthalmia, gangrene, abscesses, and nasal polypi. It was as efficacious in pulmonary consumption as the modern Lacnanthes, as potent in cancer as violet leaves; in short, Cato might have anticipated for the Cabbage a famous epitaph, transcribing it as '*Nihil tetigit quod non curavit*.'" But the secret of his Cabbage cure lay in the mode of its administration, about which he made no mystery. For instance, "if one was afflicted with colic, take a Cabbage, and, after letting it simmer well in boiling water, strain thoroughly; season with salt, cumin seed, oil, and wheat-flour; then put it on the fire again, and let it simmer for a time, after which take it off to cool. Whilst drinking this potion every morning, during the course of treatment, let your principal food be Cabbage.' In surgery, likewise, Cabbage was esteemed by Cato as "the sovran'st thing on earth for bruises, ulcers, abscesses, fistulæ, and dislocations." "An injection of Cabbage-water mixed with wine restored hearing to the deaf; whilst a strong decoction of Cabbage, if inhaled at intervals throughout three days, made polypi fall out of the nose, and destroyed the roots of the disease." It should be said that other writers of repute have regarded this vegetable with much less favour. Burton, (*Anatomy of Melancholy*), in the chapter entitled "Bad diet a cause of melancholy," disallows for eating, among other herbs, especially *Cabbage*. "It causeth troublesome dreams, and sends up black vapours to the brain." Galen, too, of all herbs condemns Cabbage. "*Animæ gravitatem facit*"—"it brings heaviness to the soul." And, as Charles Lamb slyly adds when writing on the "Melancholy of Tailors": "It is well known that this vegetable, Cabbage, has from the earliest periods which we can discover constituted almost the sole food of this extraordinary race of people." John Evelyn (1695), long after Cato, whilst

praising the Cabbage for many curative virtues, added: "It must be confessed this vegetable is greatly to be accused for lying undigested in the stomach, and provoking eructations." And Culpeper told a like tale respecting the men, and women of Cato's time: "I know not what metall their bodies were made of; this I am sure: Cabbages are extremely windy, whether you take them as meat, or as medicine! yea, as windy meat as can be eaten, unless you eat bagpipes, or bellows." Dean Ramsay tells about a Scotch farmer who at a tenants' dinner was asked by a Duchess to take Cabbage, and excused himself with the delicate insinuation, "Disna' your grace find it a verra windy vegetable?" Partridge and Cabbage suit the patrician table, whilst bacon and Cabbage better please the taste, and the requirements of the man in the street.

When fresh and young, and properly cooked, Cabbages are of excellent service against scrofula, their innate sulphur being a very salutary constituent. For a swollen face, to keep applied thereto a Cabbage leaf, first made quite hot at the fire, will afford relief (the same being likewise an Irish remedy for a sore throat), emollient warmth being thus secured, together with certain antiseptic exhalations from the steamy leaf. Also, if laid over a blistered surface, a large leaf of common white Cabbage, gently bruised, will promote a free discharge from the denuded skin; similarly, too, when placed next the skin in dropsy of the ankles.

Fermented white Cabbage was a well-known dish of the old Romans; and one of our early rustic authors advised to eat a plateful of this sour dish for dessert, "which would so quickly digest the dinner just swallowed that another such meal might be relished immediately afterwards, and eaten with impunity." For the production of this so-called *Sauer-kraut* the white Cabbage is shredded, mixed with salt in fine powder sufficient to produce a good pickle, then placed in a barrel, or other such vessel, in a compressed state, and allowed to undergo the lactic acid, or sour milk fermentation, by which the sugar becomes transformed into lactic acid, whilst giving to the product its name of "Sour Cabbage." In the Sauer-kraut of Germany the Cabbages are similarly allowed to ferment, so that by bacterial development the vegetable starch becomes converted into sugar, and then into vinegar. When prepared for cooking, Sauer-kraut has to be washed, and thus relieved of its excess of acid; it is

next stewed with butter, or some other wholesome, and palatable fat, and some standard broth, or stock, and when it is nearly done a little good wine is generally added. "The acme of all accompaniments" (says Dr. Thudicum), "not even excepting roast pheasant, is roast partridge with Sauer-kraut." The juice of red Cabbage, made with sugar into a syrup, but excluding all condiments, is of excellent remedial service in bronchial asthma, and for chronic coughs. Pliny commended the juice of a raw Cabbage, together with a little honey, for sore and inflamed eyes, when moist and weeping, but not when dry, and dull. For the scrofulous, mattery eye-inflammation of infants, after the eyes have been cleansed thoroughly every half-hour with warm water, their sockets should then be packed repeatedly with fresh young Cabbage-leaves cleaned, and bruised to a soft pulp. The flow of mattery pus will be increased for the first few days, but presently a cure will become effected. To strengthen weak eyes a poultice is employed in Hampshire, and applied cold, being made of bread-crust, and garden snails without the shells. "Cabbages in general," as Evelyn supposed, "are thought to allay fumes, and prevent intoxication; but some will have them noxious to the sight; whilst others impute this harm to the Cauliflower, about which question the learned are not agreed." Oliver Wendell Holmes, when growing old (in 1888), wrote: "My eyes are getting dreadfully dim: one of them has, I fear, though I don't quite know, a cataract in the *kitten* state of development."

In 1772, on Septuagesima Sunday, "a printed paper was handed by a footman in mourning to each *grande dame* on her leaving the Church of St. Sulpice, Paris, which paper contained a recipe for stewing red Cabbage, this proceeding being carried out in accordance with a provision of the will of the Duchesse d'Orleans, who had died on the previous day." It appeared that Louis the Fifteenth was so passionately fond of this dish that Madame de Pompadour, when she wished to specially please him, prepared it with her own hands. Sydney Smith (1840), in a letter from Green Street, London, said: "I have heard from Mrs. Grote, who is very well, and amusing herself with Horticulture, and Democracy,—the most approved methods of growing Cabbages, and destroying Kings." Thomas Carlyle, comparing by parable the Cabbage (which of all plants grows most quickly to completion) with the majestic Oak (which takes

years to become fully grown), has conveyed the lesson that those animate beings which are the slowest in their gradual progress to maturity, are found when at length they reach perfection, to have become the most richly endowed.

The word Cabbage means literally the " firm head," or " ball," formed by the compact leaves turning closely over each other into a globular form; from which circumstance tailors, who formerly worked at the private houses of their customers, were said to " cabbage " pieces of cloth rolled up tightly into a handy ball, instead of the list, and shreds which they might more fairly consider their due.

Sea Cabbage—" Sea Colewort," or " Kale "—*Crambe maritima*, (not the *Brassica oleracea*), is remarkable as being a soda plant; this mineral, or earth-salt, prevailing over the potash in its ash, and making it unsuitable for gouty persons. Brussel sprouts, which are dwarf Cabbages, go by the name in Northamptonshire of *Buffelgreens*.

CAKES.

In the making of Cakes, which are capital food for growing children, but should be plainer for the sick, good sweet butter, and fresh eggs are absolutely necessary; what is known as " cooking butter," which is a little rancid, should never be used, as is often done, this being a matter of false, and bad economy. Again, a dainty worker is needed to mix the ingredients for Cakes, and care should be taken that the baking-tin is never oiled with grease at all rancid: a very little sweet butter, or best olive oil should be employed. The dark-coloured fruit Cakes should be rather prohibited for invalids, and by persons of weak digestive powers, because of the dried fruits used in making such Cakes, also because they are often compact, close-grained, doughy, and not light. No less a saintly man than Columba learnt his alphabet by the process of eating Cakes which had the different letters stamped on them. At Biddenden, in Kent, some curious Cakes impressed with the print of two women joined together, are distributed, together with bread and cheese, to the poor on Easter Sunday. The story goes that two ladies were actually born there in 1100 joined together at the thighs, and shoulders, and who lived this double life for thirty years.

It was told disparagingly of Marie Antoinette that on hearing the poor people in Paris could not afford to buy bread, she heartlessly replied, "Then let them buy Cake." But Hall Caine has lately shown that what she really said was, "Let them buy *bonaches*," which were really small round Cakes made of the cheapest, and coarsest meal, not wheaten at all; so that Marie Antoinette knew what she was talking about, and was positively suggesting a more attainable, because cheaper, article of sustenance. The most renowned of Cakes in France is the *Gateau des Rois*, or "Cake of the Three Kings," in which a bean is concealed. On the Day of Epiphany friends and families assemble to "draw the Kings," that is to say, to draw a piece of a Cake first divided into as many parts as the number of persons present; and he, or she, who gets the concealed bean is deemed to be in luck throughout the ensuing year. In some places the Cake is cut into pieces numerous enough to leave one in excess of the number of drawers; this piece is called the "*part du bon Dieu*," and is given to the first poor mendicant, or wayfarer.

Honey Cake, "*Lecker kuchen*" (*licker* = tasty, toothsome), is probably the oldest known Cake in the world, being described in the works of the ancient Roman rustic writers. "It should be preserved," says Dr. Thudicum, "in its purity of perfection, and eaten annually by all who love the historical evolution of human culture." This is a Cake made of flour and honey, somewhat fermented, and flavoured with various ingredients. It is of admirable use against chronic constipation. Strange to relate, in some cookery books, both of England, and of Germany, neither honey, nor honey Cake, is as much as mentioned. A Brioche is a French national rich Cake of superlative quality, to be eaten with hot coffee at breakfast. Another excellent Cake for coffee, or tea, goes in Germany by the name of "Bavarian Wasps' Nests." Take a pound and a half of flour, sift it into a large pan, or bowl; add six eggs, half a pound of melted butter (which must not be hot), one pint of cream, or rich milk, one ounce and a half of yeast dissolved in the latter, and a saltspoonful of salt; work all this together until it has become a pretty firm, blistering dough, and let it rise; then remove it to a floured baking board, and roll out the dough into a thin sheet; brush it over with melted butter, and sprinkle it thickly with well-picked and washed currants, almonds blanched and minced, powdered cinnamon, and sugar; then cut the

dough into strips of three fingers width, roll up these strips from one end to the other, and place the rolls on end in a buttered, high-rimmed form; cover it up with a warm cloth, and let it rise again; bake in a moderately hot oven for three-quarters of an hour. It takes a large form to bake the present quantity. This is a Cake of so rich a quality that the lines of good George Herbert, the Divine (1630), in *The Church* will not be out of place as associated therewith :—

" What though some have a fraught
Of cloves and nutmegs, and in cinnamon fail ?
To be in both worlds full
Is more than God was, who was hungry here.
Would'st thou his laws of fasting disannul ?
Enact good cheer ?
Lay out thy joy, yet hope to save it ?
Would'st thou both eat thy cake, and have it ?

In Jane Austen's *Emma* (1816), old Mr. Woodhouse, the *Malade Imaginaire*, was sadly put out because of the rich wedding Cake, encrusted with sugar, and surmounted with luscious almond paste, finding high favour at, and after, the wedding of Miss Taylor to Mr. Weston. " He earnestly tried to dissuade them from having any wedding Cake at all; and when that proved vain, he as earnestly tried to prevent anyone's eating it. He had been at the pains of consulting Mr. Perry, the Apothecary, on the subject; who, when applied to, could not but acknowledge (though it seemed rather against the bias of his inclination) that wedding Cake might certainly disagree with many, perhaps with most people, unless taken moderately." There was, nevertheless, a strange rumour in Highbury that all the little Perrys had been seen with a slice of Mrs. Weston's wedding Cake in their hands, but Mr. Woodhouse would never believe it.

Calverley, when at the school of a Doctor Crabb, with his playmate Tommy, had the following experience (*Gemini et Virgo*) :—

" We did much as we chose to do;
We'd never heard of Mrs. Grundy.
All the theology we knew
Was that we might'nt play on Sunday;
And all the general truths,—that cakes
Were to be bought at four a penny,
And that excruciating aches
Resulted if we ate too many."

Concerning the Poet Crabbe (1818), a lady told Hallam that "Mr. Crabbe was very good Cake, only there was such a thick layer of sugar to be cut through before you could get at it." His manner to women was of the kind called "philandering," and there is nothing a woman hates more.

In the days of our grandmothers the dough of a home-made Cake was sent sometimes to the bakehouse (instead of heating the domestic oven), being wrapped in a blanket, and pricked on the soft dough with the letters of the owner's name; and hence originated the familiar nursery rhyme:—

"Pat a cake, pat a cake, baker's man!
So I do, master, as fast as I can.
Pat it and prick it, and mark it with C,
Then it will serve for Charley and me."

"Pistoris puer, o dulcem mihi tunde farinam,
Imo etiam rapidâ res erit acta manu.
Punge decenter acu, tituloque inscribe magistri.
Sic mihi, sic Carolo serviet illa meo."

For producing light, sweet, and wholesome Cakes a capital baking-powder is to be made from grape cream of tartar, as manufactured in America, and which is said to surpass all others.

CAPER.

The Caper (*Capparis*), with which we are familiar, as pickled, and used in sauce with boiled mutton at table, is a product of countries which border the Mediterranean; the unopened buds being used for condimentary purposes. Sometimes instead of this (*Capparis spinosa*), those of the wild Caper (*Euphorbia lathyris*) or Caper Spurge, are substituted, being used while unripe. Canton used to be famous for its capers, but the English market has cut them out. At one time scented Capers figured largely in the list of every Italian warehouseman, and were an indispensable item in every housekeeper's list of domestic stores. But they are not now nearly so much used as formerly, when brought from Italy, or Toulon, dried, and pickled in salt or vinegar. They then had an established reputation for curing diseases of the spleen, whilst externally the pickle of capers was applied against the left side of the belly below the ribs, on linen cloths, or sponges, for reducing enlargements of the same organ. In Germany, Capers are chopped up with anchovies, and spice,

and are then spread as a paste on rusks, or toast. Our sauces, as that of Capers, were first used in the place of salt, —in Italian *salza*,—which the French transformed into *saulza*, and which ultimately became *sauce*.

CAPSICUM.

(Cayenne, *See* Pepper.)

CARAWAY SEEDS.

The well-known aromatic Caraway Seeds of our household cakes, and of the confectioner's sugared comfits, depend for their cordial and comforting properties, (especially when bruised) on an essential oil which is fragrant, carminative, and spicy. Though originally the herb (*Carum carui*) inhabited Caria, a province of Asia Minor, it is now cultivated for commerce in England, particularly about Kent and Essex. What are known as Caraway Seeds are in reality the small dried fruit taken from the umbels. When rubbed in a mortar they give off an agreeable, strong-smelling sort of scent. Chemically, their volatile oil consists of "carvol," and a hydro-carbon, "carvene," which is a "camphor." In Germany the peasants flavour their cheese, soups, and household bread with Caraway Seeds. Also in Germany, as well as in Russia, a favourite liqueur, Kummel, is prepared from the Caraway, whilst the seeds are given for hysterical affections, being finely powdered, and mixed with ginger and salt for being spread with butter on bread. The "powdered seed put into a poultice taketh away blacke and blew spots of blows, and bruises." The oil, or seeds of Caraway do sharpen vision, and promote the secretion of breast-milk. Therefore dim-sighted men, and nursing mothers, may rejoice in eating seed-cake. This was formerly a standing institution at the feasts given by farmers to their labourers at the end of wheat sowing. Roasted apples are served at table in Trinity College, Cambridge, together with a small saucerful of Caraway seed.

For the flatulent gripings of infants a good Caraway julep may be made by infusing half an ounce of the bruised seeds for six hours in half a pint of cold water, covered over; then pour off the liquor, strained through muslin, and sweeten it to taste; from one to three teaspoonfuls may be given to a baby for a dose. As a draught for flatulent colic in the adult, twenty grains of the

powdered seeds may be taken, with a lump of sugar, in a wine-glassful of hot water. But narcotic effects have been known to follow the chewing of Caraway Seeds in excess, such as two or three ounces at a time. In the north of England an oaten cake made with treacle, and Caraway Seeds, is commonly eaten at breakfast. A poultice of crushed Caraway Seeds steeped in hot water to the consistence of a pulp, and applied within muslin around a sprained joint, will afford speedy relief. The young roots of Caraway plants as cultivated in Kent, and Essex, may be sent to table like parsnips; they warm and stimulate, and strengthen a cold languid stomach.

CARROT.

THE Garden Carrot (*Daucus carota*), an umbelliferous plant, is so common a vegetable with us all as not to need any descriptive preliminaries. The root contains an essential oil, which is fragrant, aromatic, and stimulating. Upon this much of the virtues depend. Carrots are also rich in sugar, both cane, and fruit, in kind, to the amount of nearly 10 per cent. Their juice when expressed affords "carotin," in red crystals, with pectin, albumin, and the volatile oil already mentioned. The chief virtues of the Carrot lie in the strong antiseptic qualities which it possesses, as preventive of putrescent changes either within the body, or when applied externally. The sugar of Carrots can be collected from their inspissated juice, and used at table, being excellent for the coughs of consumptive persons. At Vichy, where derangements of the liver, and of the biliary digestion, are specially treated, Carrots in one form or another are served at every meal, whether in soup, or with meat, or as a vegetable dish, considerable efficacy for cures being attributed to them.

For preparing Carrot juice, rub cleansed Carrots with a grater, and squeeze their juice through a clean cloth; then boil it, with, or without sugar, skimming carefully the while. When it no longer froths take it off the fire, and let it cool. Then strain it through a cloth, and pour it into glasses. A teaspoonful thereof may be taken several times in the day for subduing a troublesome cough, or as a quieting nervine cordial. Confectioners often mix the pectin of Carrots, residing principally in their outer rind, with fruit jelly as a diluent.

But " the Carrot when boiled, or stewed, cannot be regarded," says Dr. Hutchison, " as at all a digestible form of food ; nor is it easily disposed of by the stomach ; five and a half ounces of the cooked root remain there for three hours and twenty minutes." The yellow core of the Carrot is the part which is difficult of digestion by some persons, not the outer red layer, the thickness of which is a test of the goodness of the root.

For a Potage of Carrots (Creole), " Clean, and cut up fine, four very red Carrots, two large onions, one turnip, and two sticks of celery. Put these to fry with a piece of butter the size of an egg, and about a teaspoonful of sugar. Brown slightly, and pour in four or five teaspoonfuls of boiling water. Simmer for a quarter of an hour, and turn all into the soup kettle, with salt and pepper to taste, adding a bouquet of herbs, thyme, parsley, a few cloves, and a bay-leaf, tied together with thread. Pour in a quart of boiling water ; cover, and simmer gently for at least two hours ; the vegetables must become perfectly soft. Mash through a sieve, and return to the fire, adding a pint of milk ; when boiling stir in a teaspoonful of flour that has been well blended in a little cold water, or milk. Let it boil a minute or two, and serve at once with croutons."

Being boiled sufficiently in a little water, and mashed into a pulp, Carrots will sweeten, and heal a putrid indolent sore if applied fresh from time to time. The Carrot poultice was first used by Salzer, for mitigating the pain, and correcting the stench of foul ulcers. Dr. Oliver Wendell Holmes, when writing to Dr. W. Hunt, 1863, tells him how a man's heel which was severely wounded at the battle of Fredericksburg was treated : " Dr. Bigelow does nothing but keep the wound open, making the patient use for this purpose a little plug of Carrot, which is handy enough, and seems to agree very well with the wound."

> " The great Achilles, who had shown his zeal
> In healing wounds, died of a wounded heel.
> Accursed heel, that killed a hero stout,
> Oh ! had your mother known that you were out,
> Death had not entered at the trifling part,
> Which still defies the small Chirurgeon's art
> With corns, and *bunions*, (not the glorious John
> Who wrote the book we all have pondered on),
> Big tender bunions, bound in fleshy hose,
> To Pilgrim's Progress unrelenting foes."

When Carrots are eaten as a vegetable, remarkably little of their solid nutriment is so digested as to become absorbed into the system, but this passes off from the bowels as excrementitious waste, (to the extent of nearly 40 per cent of the vegetable taken), though without causing diarrhœa, or other intestinal disturbance. Dishes at table which contain Carrots, particularly in purée, are said to be "à la Crecy." A tea made from the Carrot plant, sliced root, and leafy top bruised, some of which tea is drunk each night and morning, proves of excellent use when a disposition to gouty acids, and to gravel prevails. If cows are fed long on Carrots, they begin to pass bloody urine. In one thousand parts of the Carrot, there are ninety-five of sugar. and only three of starch. Recently M. Charrin kept some rabbits fed on Carrots which had been sterilised of their microbes, whilst other rabbits were kept on Carrots still retaining their microbes from the soil. The former animals soon died from corrupt products within their intestines ; but the latter rabbits continued to thrive.

A Manchester physician has told recently of an alleged cure for consumption by the simple remedy of eating raw Carrot ; which method certainly seems to have proved itself well worth a trial. In the British *Flora Medica*, 1830, it is stated, " Margraf directs that the recent roots of Carrot should be cut, well washed, and beaten into a pulp, from which the juice is to be expressed through a sieve, and reduced by heating to the consistence of honey, in which state it may be used at table instead of sugar, and is well adapted for the consumptive coughs of young children ; also against worms."

For delicate persons, who find it best to dine in the middle of the day on plain foods, an excellent supper vegetable is a fair-sized Carrot boiled whole so as to retain its aromatic properties ; then split into quarters, and warmed afresh for being served hot. It acts as a nervine sedative, whilst being cordial and restorative. A sense of mental invigoration will follow, and the digestion of this estimable root will be readily performed, without preventing the sleep.

To make a purée of Carrots : take one pound of cleansed Carrots, peeled and washed, put them into cold water with a little salt, bring them to the boil, then strain and rinse them, and place them in the stewpan, with enough light stock to cover, adding a dust of castor sugar. Simmer the Carrots until

tender, then rub them into a paste with three plainly-boiled potatoes, mashing this through a hair sieve (adding a pat of butter, or a little cream, except for a person with disposition to biliousness), stir till boiling, then serve.

The small purple flower which grows in the middle of the umbel crowning a full grown Carrot plant, has been found of benefit for mitigating epilepsy.

CAUDLE.

PRACTICALLY Caudle, so called from the Latin "*Calidus*" hot, or the old French word "*Chaudel*," is a drink of warm ale made with groats, and given to the sick as a restorative support. It is more frequently composed of warm wine (or ale), mixed with bread, sugar, spices, and sometimes eggs; being administered specially to a woman in childbed (though with doubtful wisdom), and to her congratulatory visitors. "Hark ye, Master Hollytop! your wits are gone on wool-gathering: comfort yourself with a Caudle" (Sir Walter Scott's *Abbot*). For "tea Caudle, make a quart of strong green tea, and pour it out into a skillet (a long-handled metal pot), and set it over the fire; then beat up the yolks of four eggs, and mix with them a pint of white wine, a grated nutmeg, and sugar to taste; put all together; stir it over the fire till it is very hot, then drink it in china dishes."—*Compleat Housewife*, 1736.

When Harley (in the *Man of Feeling*, 1771) "came downstairs to set out for London, he found his aunt in the parlour with a tear on her cheek, and her caudle cup in her hand; she knew enough of physic to prescribe against going abroad of a morning with an empty stomach: and she gave her blessing with the draught."

For old-fashioned brown Caudle: stir two tablespoonfuls of oatmeal into a pint of water, and add the thin rind of a lemon, a blade of mace, and a tablespoonful of brown sugar. Let all boil together: then strain the liquid, and add a pint of mild ale. Warm it for use. A little grated ginger is often put into this Caudle. The old-fashioned Caudle-pot was of glazed Delft-ware, holding about a quart, and having a small curved spout which went into the mouth of the drinker. Such a pot (now much sought after by collectors) is to be seen among the treasures at Lilford Hall, Northants.

CAVIARE.

THE salted roe of the Sturgeon, known as far back as in Shakespeare's day (who spoke of it as 'Caviare,' but not appreciated by the multitude), has been humorously styled "salt blackberry jam." Some persons deem this commodity delicious, whilst others maintain it to be intolerably nasty. Its parent Sturgeon abounds on the southern coast of Russia, being taken for its Caviare, chiefly at Astrachan. There are two kinds of the roe; one of a light-grey colour, and semi-liquid, called "fresh," of which the Germans are very fond, but which is little known in England; the other kind is of a darker hue, containing the eggs of the roe crushed, and strongly pressed together, so that much of the moisture has been squeezed away. Out of Russia, Caviare is a *chaudfroid* at table, being eaten cold on hot toast. In England it is served—quite as a mistake—at the end of dinner, when the appetites of the guests are already satisfied; but in Russia and France it is more wisely regarded as a *hors d'œuvre*, always appropriate at luncheon, and usually acceptable as a whet before dinner. Caviare is correctly a prelude to a repast, and a stimulus to the appetite. At the end of dinner it is simply useless, and even mischievous. It should be moderately seasoned with cayenne pepper, and lemon juice. The Russians are quite content to eat their Caviare on slices of bread and butter. It is served on a side-table as a preliminary relish to a meal. Taken medicinally, Caviare, by reason of its abundant fish oil, has been found to occasionally rescue a patient when in the last stages of diabetes; for which disease fat is indeed a sheet anchor, because of its large sustaining powers, and because it never dietetically increases the formation of sugar in the liver.

Dr. Yeo has commended Caviare as a savoury for aged persons, who need some sort of condiment with their food, to promote digestion, and prevent flatulence. One of the best kinds in commerce is the Saxony variety, which is packed in linen, and is less salt than the others. There should be no smell to Caviare, though frequently an acid odour is discerned; the best sort is neutral, but the poorer kinds usually give an acid reaction to litmus (test) paper, containing also traces of free ammonia, some hydrogen sulphide, and free fatty acids. Logan relates in *Joyful Russia*, 1897, "It was the fresh Caviare that I revelled in, which was spread on bread or toast, at the Lakuska, or Russian

snack luncheon, and was in either case laid on thick, being sprinkled over with chopped onion, and lemon." At St. Petersburg it is eaten fresh as a *hors d'œuvre*, from glass plates, with glass spoons. As to the Sturgeon (or royal fish) for food, its flesh in firmness, and dark red colour resembles beef, or veal, and is almost as savoury. Robert Lovell declared this fish cleareth the voice. It is called a *stirrer*, because it stirs up the mud by floundering at the bottom of the water. The Sturgeon is killed in the Mediterranean by blows on the head with heavy clubs, and its spinal marrow is taken out, being then made into patés; the flesh may be boiled in slices, or stuffed and roasted. This flesh cannot be cooked better than by being roasted thoroughly before the fire, whilst basted liberally with white wine; or the fish will make a delicious soup. Queen Elizabeth was very fond of Sturgeon in puddings, or pies. She ordered sturgeon-pie with rosemary-mead to be prepared for breakfast. Alexis Soyer taught persons of limited means to smuggle a slice of Sturgeon, with a few chopped shalots, beneath the piece of meat which was sent to the bakehouse, under cover of the potatoes which accompanied it. George the Second of England, who had a German *chef* as cook, liked everything very full flavoured, Sturgeon not too fresh being one of his favourite dishes.

CELERY.

Our garden Celery (*Apium sativum*) is a cultivated variety of the wild Celery (*Apium graveolens*) which grows abundantly in moist English ditches, and in water, being unwholesome as a food, and with a fetid smell. But like several other plants of the same natural order (umbelliferous), when transplanted into the garden, dressed, and bleached, it becomes fragrant, healthful, and an excellent condimentary vegetable, besides now taking high curative rank. Our edible celery is a striking instance of the fact that most of the poisonous plants can by human ingenuity be so altered in character as to become eminently serviceable for food, or physic. Thus the wild Celery, which is certainly dangerous when growing as a plant exposed to the daylight, becomes most palatable, as well as beneficial, by having its young, crisp, leaf-stalks earthed up, and bleached during a time of cultivation. It contains some sugar, and a volatile,

odorous principle, which in the wild plant smells, and tastes strongly, and disagreeably. The characteristic odour, and flavour of the cultivated plant are due to this same essential oil, which has now become of modified strength, and qualities; also when freshly cut our Celery affords albumin, starch, mucilage, and mineral matters. Dr. Pereira showed that it contains sulphur, a known antiseptic, and a preventive of rheumatism, as freely as do the cruciferous plants, mustard, and the cresses.

"Celery," said Mr. Gibson Ward, President of the Vegetarian Society, 1879, in some letters to *The Times*, "is when cooked a very fine dish, both as a nutriment, and as a purifier of the blood. I will not attempt to enumerate all the marvellous cures I have made with celery, lest medical men should be worrying me *en masse*. Let me fearlessly say that rheumatism is impossible on this diet; and yet English doctors in 1876 allowed rheumatism to kill three thousand, six hundred and forty human beings, every death being as unnecessary as a dirty face."

This herb "Sallery," wrote John Evelyn in his *Acetaria*, or *Book of Sallets*, "is for its high and grateful taste ever placed in the middle of the grand sallet at our great men's tables, and our proctor's feasts, as the grace of the whole board." Chemically Celery contains apiin, and a glucoside, or sugar, combined with apigenin (a yellowish sublimable aromatic principle) which is said to be harmful to diabetic sufferers. With certain susceptible persons the cultivated garden Celery disagrees violently, causing severe oppression of the chest, and constrictive trouble of the throat, within two or three hours after eating it; also a swelling of the face and hands, with a general itching of the skin. If plainly stewed in only its own water, Celery retains all the useful properties of the stalks. Again, the solid roots of the plant, if cut into dice, and baked a nice brown, may be ground into Celery coffee, which can be used like ordinary coffee, making a refreshing beverage beneficial to the nervous system when needing recruital. The old Romans employed the Celery plant in garlands, to be bound around the head for neutralizing the fumes of wine. It represented one of the Parsleys.

Celeriac is the turnip-rooted Celery, and is likewise cooked as a wholesome vegetable.

Or again, for relieving rheumatism, wash the Celery, and cut it into small pieces, and stew them well in quite a little water. Strain this, and put it aside to be taken two or three

tablespoonfuls at a time. Dr. Stacey Jones advises Celery-tea, hot and strong (with cream and sugar, if desired), to be drunk by the teacupful three or four times in the day, so as to abate neuralgia, and even sciatica, which it sometimes will do very speedily ; likewise sick headaches. For ordinary stewed Celery as a vegetable dish, cut five or six sticks of Celery into lengths, each about four inches, and stew these in some good brown stock until tender ; take out the Celery, and reduce the stock to half the quantity : thicken with a little butter and flour : add pepper and salt : then pour this over the Celery, and serve on a square of toast, very hot. For making Celery water, allow a large head for each quart of water. Cook this when washed, and cut up, until the water is reduced to a pint : then strain, and give a wineglassful two or three times in the day. It is best taken on an empty stomach.

CEREALS.

(*See* BARLEY, BREAD, PULSE, RYE.)

SEVERAL of the esculent grains contain delicate particles of soda, in the chemical form of a sulphate. This salt when given as a drug is not readily assimilated in the body ; but as obtained by Nature's method it is resolved into its integral elements, so that the sodium base serves to oxidize sugar in the body, and thus to make it available for cell building, and for rendering the bile soluble.

CHAMPAGNE (*See* WINES.)

DRY Champagne contains no appreciable sugar, but when exported it usually has some melted sugar-candy, mixed with brandy, put into it. As the grapes from which it is made are not fully ripe, a second fermentation progresses in the bottled wine during the first year and a half. Carbonic acid gas is thus largely retained, which gives the exhilarating effects of the wine more than from its alcohol, this being in only a small percentage. A spurious Champagne is much manufactured, sometimes from gooseberries or rhubarb, and charged with carbonic acid gas.

CHEESE.

WHEN milk is coagulated by rennet, or some other acid, it separates into solid curd, and liquid whey (or serum). If the

solid parts are collected, and pressed together in a mould, hoop, or vat, they unite to form firm Cheese. Other substances will serve to curdle milk in a like manner, such as the "Bedstraw" (*Galium*, from *gala*, milk), a hedgerow plant; also the juice of the fig-tree.—Parenthetically the curative virtues of the common hedgerow *Galium aparine* (goose-grass, cleavers, or hedge-heriff) which are specially present in this herb, and its allies, should certainly be told about. They are of undoubted reputation with reference to cancerous growths, and tumours of a kindred nature. For open cancers an ointment is made from the leaves, and stems, with which to dress the ulcerated parts, and at the same time the expressed juice of the fresh herb is given internally. On analysis this plant is found to contain three distinct acids—the tannic acid (of galls), the citric acid (of lemons), and its own peculiar rubichloric acid. Considered generally, the Goose-grass exercises acid, astringent, and diuretic effects, being remedial therefore against such diseases of the skin as lepra, psoriasis, and eczema, whilst remarkably helpful in some cases of epilepsy. An authorized officinal juice of the herb is dispensed by druggists, as well as a thickened extract; or, this Goose-grass may be readily gathered fresh about most of our rural fields, and waste places, in which it grows luxuriantly, climbing with boldness by its slender, hairy stems through the dense vegetation of our hedges into open daylight, whilst having sharp, serrated leaves, and producing small, white flowers "pearking on the tops of the sprigs." The stalks and leaves are armed with little hooked bristles with which they attach themselves to adjacent shrubs so as to ascend in ladder-like fashion. The botanical affix "aparine" is derived from a Greek verb, "*apairo*," to lay hold of. Dr. Quinlan, of Dublin, directs that whilst a bundle of ten, or twelve stalks is grasped with the left hand, this bundle should be cut into pieces of about half-an-inch long by a pair of scissors held in the right hand. The segments are then to be bruised thoroughly in a mortar, and applied in the mass as a poultice beneath a bandage. The goose-grass has been employed thus with highly successful results to heal chronic ulcers on the legs. Appellations of "Cheese-rennet" and "Cheese-running" are given to its order of herbs. Highlanders make use in particular of the common Yellow Bedstraw (*Galium verum*) for curdling their milk to get Cheese, and to colour it; this grows abundantly on dry banks, chiefly near the sea; from its small golden flowers

is prepared an ointment "good," says Gerarde, "for anointing the weary traveller." This herb is *par excellence* the Bedstraw of "*Our Lady*," who gave birth to her divine Son, says the legend, in a stable, with wild flowers only for the bedding. Thus in an old Latin hymn she sings right gloriously :—

"Lectum stravi tibi soli : dormi, nate bellule !
Stravi lectum fœno molle : dormi, mi animule !
Ne quid desit sternam rosis : sternam fœnum violis,
Pavimentum hyacinthis, et præsepe liliis."

"Sleep, sweet little babe on the bed I have spread thee :
Sleep, fond little life, on the straw scattered o'er !
' Mid the petals of roses and pansies I've laid thee,
In crib of white lilies : blue bells on the floor."

Pure milk, when curdled by rennet, leaves most of its fat in the Cheese (casein, or curd, as in Cheddar Cheese) ; but if some of the cream is first removed from the milk by skimming, then a Cheese is produced which is poor in fat, like Dutch Cheese. Good Cheese is composed of from 30 to 50 per cent of water, 20 to 25 per cent of casein, or curd, 18 to 30 per cent of fat, and 4 to 6 per cent of mineral matter. If, again, the curd is precipitated by letting the milk become sour, or if by adding vinegar to it, then a comparatively poor Cheese is the result. Also the nature of the Cheese will depend much on the kind of milk used. When the casein, or curd, is squeezed, and pressed so as to remove the liquid whey, if high pressure is used then hard Cheese is made ; if lower pressure is employed, then a soft Cheese is produced, but not of a sort which keeps well. The next step is to ripen the Cheese, a process dependent on bacterial life introduced from without, either spontaneously, or by design, the flavour of the Cheese being determined by the particular species of germ which obtains access to it whilst it ripens. The mineral matters contained in Cheese are chiefly salts of lime, and some Cheeses contain further about 2 per cent of milk sugar (lactose). The infiltration of plentiful fat comprised in Cheese makes it always an article of diet not easily dealt with by delicate stomachs, especially when animal food is likewise eaten. The incorporated fat (which is not miscible with the gastric juices) prevents digestive juices reaching the curd thoroughly, so that Cheese should be carefully masticated in order to finely divide its substance before swallowing the same ; or, another plan is to grate the Cheese before eating it, or to dissolve it in a little water

or milk, (perhaps adding a few grains of alkaline potash to assist the solution). Another reason why Cheese proves indigestible to certain persons, is that during the process of ripening, small quantities of fatty acids are produced, which are apt to disagree in the stomach; but when once reaching the intestines, Cheese is absorbed as readily, and as completely as meat. To the person who wishes to use Cheese as a substitute for meat (because more economical, and fully as nourishing), the Canadian, or Dutch quality may be best commended, preferably the former; and new Cheese is much to be advocated, before fermentation has begun to any degree of progress. But Cheese should not be eaten at all freely by persons who are leading inactive, indolent lives, since the substantial casein, which is its chief constituent, would to such persons be difficult of digestion; otherwise its component principles furnish fat, heat, and energy to a remarkable degree.

The average palate has been taught to relish Cheese after it has undergone butyric acid fermentation (which is, in fact, the first stage of putridity). But years ago, when the small dairymen made plain Cheese for their own use, not for the market, they began to eat it before it was a fortnight old, and took it as freely as they did bread, never dreaming of its proving difficult of digestion, which it never was. Nowadays, to put such simply compressed casein before the lover of modern-cured Cheese, would be to him almost an insult; and yet from the standpoint of health, it is the only Cheese which can be altogether approved; though equal praise may be given to the fresh curd, consisting of unaltered albumin of milk, in combination with some fat, a little milk sugar, and some lactic acid. The numerous varieties of mature Cheese are products altered more or less to a degree proportionate with their stage of ripeness. Some soft Cheeses ripen in a week or two; others, of firmer consistence, take many months to mature. Parmesan Cheese, made at Parma, in Northern Italy, from skimmed milk of special cows, and coloured greenish with saffron, is a hard article which requires three years to ripen.

Whilst contained in fresh milk the casein, which forms the substantial basis of Cheese, exists in two forms, the soluble, and the insoluble; in the first of these it remains completely dissolved in the milk, whilst in the latter it is made by art to coagulate as insoluble Cheese, but carrying

with it the fatty matter, or cream. The coagulation from the soluble to the insoluble form by rennet becomes produced rather mysteriously. The milk sugar is probably changed into lactic acid, which then serves to coagulate the milk-casein. A similar coagulation takes place within the stomach by the acid gastric juice, when milk is had as food. The casein of fresh milk contains more nutritious material than any other food which is ordinarily to be obtained, except that the mineral salts which have been dissolved in the whey are left behind. Cooked casein is more digestible than the raw substance as we for the most part eat it in Cheese, junket, or curds ; but its heated preparations are unknown to our kitchens except as Welsh Rabbit (rare-bit), which is an indigestible dish as generally made.

"Here comes the practical question, Can we assimilate, or convert into our bodily substance, the Cheese food as easily as we can flesh food ?" "I reply" (says Mattieu Williams) "we certainly *cannot* if the Cheese is raw, but I have no doubt we may do so if it be suitably cooked." The Swiss make, as one of their plainest and commonest dishes, a Cheese *fondu*, of eggs, and grated Cheese, with a little new milk, or butter, and cooked in the condition of a paste ; or else with slices of bread soaked in a batter of eggs and milk, and covered with grated Cheese, being then gently baked ; by some persons the bread-crumb is likewise grated. In such fashion is concocted the "Cheese pudding" of the Swiss, who gain the mineral salts lacking in their Cheese by their accompanying salads of fresh vegetable substances rich in potash salts. Mattieu Williams adds : "The following is a simplified recipe of my own : Take a quarter of a pound of grated Cheese, add to it a teacupful of milk, in which is dissolved as much powdered bicarbonate of potash as will stand on the surface of a threepenny piece ; also add mustard, and pepper to taste ; heat this carefully until the Cheese is completely dissolved ; then beat up three eggs (yolks and whites together), and add them to this solution of Cheese, stirring the whole. Now take a shallow metal, or earthenware dish, or tray, which will bear heating, put a little butter on it, and heat the butter until it frizzles ; next pour the mixture into the tray, and bake, or fry it until it is nearly solidified. The bicarbonate of potash is an original novelty which may possibly alarm some readers averse to medicinal agents, but its harmless use is to be advocated for two reasons : First, it effects a better solution

of the Cheese curd, or casein, by neutralizing the free lactic acid which inevitably exists in the milk beforehand, as well as any other free acids which are present in the Cheese ; and the second reason is of greater weight : salts of potash are essential for mankind as necessary constituents of his food ; they exist abundantly in all kinds of wholesome vegetables, and fruits, and in the juices of fresh meats, *but they are wanting in Cheese*, having, because of their greater solubility, been left behind in the whey. This absence of potash seems to me to be the one serious objection to a free use of Cheese diet exclusively." Cheese, says an old adage, digests everything but itself,—" Caseus est nequam : digerit omnia sequam."

Quite lately casein, the proteid, or chiefly nutritious part of milk, has been separated in the powder form, dry, as Plasmon, this being devoid of water, fat and sugar, but also of such potash salts as remain dissolved in the liquid portion of the milk (unless evaporated out, and added again). The Plasmon, or pure casein, is obtained from skim milk, and is intended for addition to other foods, to increase their stock of proteid. It is the product of separated milk, as a fine white powder, being literally Cheese without its fat and its milk sugar, nothing remaining practically except pure casein, or flesh-forming material, utilizable with obvious advantage for many combinations. Dr. Robert Hutchison recently, in an address on Patent Foods delivered to the S.W. London Medical Society, whilst passing a sweeping condemnation on most of these as costly, and unequal to plain ordinary foods, went on to add encomiums on one class of such foods in which the casein, or proteid of milk has been separated in its integrity, for being added to enrich other foods as to their sum of proteid. " I think," he concludes, " one may say that these are among the most useful of all artificial foods. There is no doubt that preparations of the kind can be added in very large amount to ordinary foods, such as soups, and milk, and even to some solid foods with great benefit, and without the sick person being aware of such addition ; and, seeing that these preparations certainly contain 80 or 90 per cent of pure proteid, it can be well understood that the amount of nutritive material which they are the means of supplying is considerable. I know of no special indications necessitating their use, but there are many conditions of disease where one wants to enrich a fluid diet. If a patient is on pure milk, and you desire to increase

the nutritive value of such milk, then it is that such preparations can be made very useful; and they can be added, whilst knowing that they will be easily digested, and almost completely absorbed, and that they can do the sick person no harm. Looking at the subject all round, these are among the most trustworthy of all the artificial foods, and have the further advantage that they are economical, because the casein is extracted from skim milk, which would otherwise be thrown away."

It must be remembered that Cheese by its preparation loses the basic alkaline salts, which should serve the purpose of neutralizing uric acid, as formed during its use by combustion in the system. About certain parts of Saxony, in the Altenburg district, where the peasantry consume much Cheese, bladder-stones of uric acid formation are found to be very frequent. But in Switzerland, where Cheese is likewise largely consumed, such bladder-stones are rare, simply because much fruit, rich in salts of potash, is also eaten there. As Cheese ripens it owes the elements of its savour to the decomposition of its casein, which substance in its original state is without flavour, or odour; the presence of fat prevents decomposition from going too far. Nevertheless, a butyric fermentation proceeds in the Cheese, giving it presently a strong odour, and advancing to putrescence, so that many varieties of the aliment will then produce in the eater toxic symptoms more or less pronounced. The principal poisonous agent in such Cheese is chemically *tyrotoxicon*, and old decayed Cheese sometimes causes through the presence thereof colic, diarrhœa, double vision, pain about the heart, and collapse. But the mould of Cheese is of vegetable nature, a fungus, and not bacterial, nor bacillary. One pound of sound Cheese made from a gallon of new milk contains as much fat as three pounds of beef, and as much protein (animal substance) as two pounds of beef; the casein, and the butter-fat are very nutritious. Casein consists as to its elements, of hydrogen, nitrogen, carbon, and sulphur. If sugar and bread be eaten with Cheese, then all the constituents of a valuable meal are secured, but vigorous outdoor exercise should be taken so as to ensure its digestion.

Toasted Cheese is digestible if it is new, and lightly cooked, with perhaps cream, or butter added; but tough toasted Cheese is about as indigestible as leather. A Welsh Rabbit is made of Cheese melted with a little ale, and then

poured over slices of hot toast; sometimes cream is added, also mustard, or Worcester sauce. If freely peppered with cayenne, it proves of help to hard drinkers when threatened with delirium tremens, and serves instead of more drink to satisfy their cravings. In Lewis Carroll's *Hunting of the Snark* the baker, having no fixed name, was called by his companions "Toasted Cheese." The famous "Olde Cheshire Cheese" Tavern, in Fleet Street, London, is historically associated with Johnson, and Goldsmith. Here you may yet see the Doctor's chair, and sit where he, and Goldy sat. In *The Cheese* Isaac Bickersteth made an epigram which contains the oft-quoted lines :—

> "Perhaps it was right to dissemble your love :
> But why did you kick me downstairs ?"

The fare of the "Cheshire Cheese," whilst of the good old English sort, is world famous; its steaks and its ham are traditions; but the celebrated pudding, made for two centuries from the same recipe, and served every Wednesday and Saturday to an appreciative and hungry gathering, is the crowning glory of the Old Tavern. This pudding ranges from fifty, to sixty, seventy, or eighty pounds in weight; and gossip has it that in the dim past the rare dish was constructed of a hundredweight proportion. It is composed of a fine light crust, in a huge basin, and there are entombed therein beefsteaks, kidneys, oysters, larks, mushrooms, with wondrous spices, and gravies the secret of which is known only to the compounder. The boiling process takes from sixteen to twenty hours, and the scent of it on a windy day has been known to reach as far as the Stock Exchange. The process of carving it is as solemn a ceremony as the cutting the mistletoe with the golden sickle of the Druids. Old William, for many years the head waiter, could only be seen in his real glory on pudding days. He used to consider it his duty to go round the tables insisting that the guests should have second, and third,—aye, with wonder be it spoken !—and fourth helpings! "Any gentleman say 'Pudden ?'" was his constant query; and this habit was not broken when a crusty customer growled, "No *gentleman* says 'Pudden.'" William, like most of his customers. has passed away, but a room remains consecrated to his memory and is still called by his name.

Cheddar Cheese, made chiefly at Pennard, contains from

23 to 29 per cent of casein (proteid), from 30 to 40 per cent of fat, and from 3 to 5 per cent of mineral salts ; its savoury residuum is very small. Cheshire Cheese is very similar, but contains more sugar of milk. The common Dutch Cheese, as supplied by our grocers, is a small, hard, round Cheese made from skimmed milk, and coloured outside with madder. It contains from 19 to 24 per cent of casein, and only from 16 to 24 per cent of fat, with from 5 to 6 per cent of sugar of milk. But in Holland the Dutch, or "Cottage" Cheese, is a preparation of pressed curds, prepared with muriatic acid instead of rennet, and served with salt, or with sugar, and cream ; this is "smeer-kaas," pot-cheese. In the Dutch and Factory Cheeses, curdled thus with acid instead of rennet, the highly important and essential earth-salt, phosphate of lime, is left behind dissolved in the whey, and thus the food value of these Cheeses is seriously lowered. Phosphates of the earth-salts are concerned in bone-making for the growing subject, also to some extent in building up the brain, and nervous substance in the body, though not so vitally in the latter respect as is commonly supposed. Bone contains about 11 per cent of phosphorus, but brain substance less than 1 per cent. The phosphate of lime which is supplied by Cheese made with rennet, is probably in a condition of such fine division, that it can be readily dissolved by the gastric juice in the stomach. For a dish in which there is a true cooking of Cheese by solution, and with an admirable result, grate six ounces of rich Cheese (Parmesan is the best), put it into an enamelled saucepan, with a teaspoonful of flour of mustard, a saltspoonful of white pepper, a grating of Cayenne, the sixth part of a nutmeg (grated), two ounces of butter, two tablespoonfuls of baked flour, and a gill of new milk ; stir it over a slow fire till it becomes like thick, smooth cream (but it must not boil) ; add the well-beaten yolks of six eggs ; beat for ten minutes, then add the whites of the eggs also beaten to a stiff froth ; put the mixture into a tin, or into a cardboard mould, and bake in a quick oven for twenty minutes ; serve immediately.

Stilton Cheese has been made until lately almost always in Leicestershire, being a solid, rich, white English production, the cream of one day being added to the entire milk of the next ; then the curd is put into moulds, and allowed to sink of itself, no pressure whatever being applied. Other kinds, such as Cheddar, are subjected to a pressure of as much as one ton, or

twenty-five hundredweight. Stilton Cheese requires, first, lactic bacteria to convert the milk sugar into lactic acid; then other special bacteria act on the casein, and peptonize it, changing the curd from a hard, insoluble substance into what is soluble and digestible, whilst the oidium, or lactic mould, gives the coating; the blue inner mould goes by the name of *Penicillium glaucum*. This fine Cheese can now be imitated anywhere by using rich milk, and the famous *Bacterium B.* 41, of which pure cultures are made, and employed all over the world.

Gorgonzola is an Italian Cheese (North Italy), made from the native pasture milk, and strongly resembling Stilton. After the curd has been thoroughly squeezed, a tumblerful of milk putrescent to mouldiness is added. This Cheese is coloured by Sage leaves, and its green mould is said to be an imitation effected by transfixing the Cheese here and there with copper skewers which are left in for a while. Originally this Cheese was made of so rich a quality as to fetch half-a-crown a pound (the mode of its manufacture being kept then a strict local secret), but now most of the Gorgonzola Cheese which comes into the market is fabricated, and sells for about tenpence a pound. Again, the green colour of certain other Italian Cheeses is attributed to the milk having stood for a time in copper vessels, during which time of repose the milk would absorb an appreciable quantity of copper. In twenty-five samples of Parmesan Cheese, there was found to be present to every two pounds of the Cheese, from 0·8 to 3·3 per cent. of copper. Parmesan is a hard, dry, highly-flavoured Italian Cheese coloured with saffron. It is made among the rich pasturage of the Po meadows, from cows' milk partly skimmed. Professor Macfadyean told his hearers at the Royal Institute, February, 1903, that there is no finer food in the world for nutritive purposes than Cheese grated, and put into proper soups, such as of lentil, and the like, just as the Italians invariably sprinkle Parmesan over their "Minestra."

Camembert Cheese is made from new milk coagulated by the action of rennet, being then ladled into moulds, and allowed to drain; these are then salted, and turned daily, whilst kept in caves, or cold cellars, for six weeks until ripe. The different flavours of the various sorts of Cheese are due, not to something in the local soil where each is produced, but simply to methods in making, which give more or less play to the several kinds of

microbes. Taking Camembert as an example, on the outside of this is to be seen a greenish colour, consisting of a dead fungus, which while it lives gets into the curd, and feeds on the acid of the fresh Cheese for its maintenance. Meantime this acid is fatal to the particular microbes which give the Camembert its distinctive flavour; but directly the acid has been all used up by the fungus from within the Cheese these microbes begin to multiply, and spread. The special fungus, or mould is allowed to exist on the walls of the Camembert Cheese factories, and its little poppyheads burst, keeping the air full of dusty spores which penetrate the curd. Then the microbes which are already there (since the exhaustion of the curd acid by the fungus) start work, and convert the curd into soft digestible Cheese.

So is it similarly, with all the foreign Cheeses. A French doctor has identified the several microbes which produce the approved flavours, and which can be supplied in separate bottles. With such microbes, and a few plain directions about temperature, any Cheese may be made at option. The monks of Briquebec, Port du Salut, have been noted for supplying a famous Cheese, the secret of which they would not reveal. But some scientists secured specimens of its particular microbe, then cultivated the same in test-tubes, and were thus enabled to tell all the world how the said famous Cheese can be produced. A Camembert Cream Cheese is made to-day at Reading, its imported bacteria being the *Micrococcus maldensis*, and *Bacillus fermitatis*, and its mould *Penicillium candidum*. Nowadays, at the different dairy factories up and down the country, whither the farmers send their milk, the butter-fat is extracted, whilst the residual milk, sugar, casein, and other solids remain in their hands wherewith to feed the calves; and as these creatures require some sort of fat in place of the Cheese-cream, cod-liver oil is added, at sixpence a gallon, very successfully.

Roquefort Cheese is made from the milk of ewes, and goats. When dry enough the Cheeses are placed in a deep cavern of the limestone rock, at a temperature of 40° Fahrenheit. They are salted, and the mould fungus is scraped off from time to time, until they turn from a white to a blue, and on through that to a reddish brown; this is a rich Cheese, and has to be kept a considerable time before it is ripe enough for eating.

Gruyere Cheese (from Gruyere, a Canton of Switzerland) is made by the curd being pressed in large, and comparatively

shallow moulds, then heavily salted for a month, or more, while still in the moulds. It is traversed by abundant air-bubbles, and open passages, whilst flavoured by the dried herb Melilot, or sweet yellow Clover (admirable against nose-bleeding).

Sage Cheese is coloured with bruised Sage leaves, or in Scotland with lovage leaves, also with marigold leaves, and parsley.

"Marbled with sage the hardening cheese she pressed."

Gay.

Sydney Smith, when writing to Robert Murchison, the geologist (December, 1841), said: "Heaven send I may understand your book, but my knowledge of the science is too slender for that advantage,—a knowledge which just enables me to distinguish between the caseous and the cretaceous formations; or, as the vulgar have it, to "know chalk from cheese"; (the real meaning of which is to have ready possession of one's wits; to know a poor, spurious article from a good, or genuine one). Groaning Cheese, as we read in Bourne's *Popular Antiquities*, takes a part in the blithement, or entertainment, provided after the birth, or at the christening, of an infant. "It is customary at Oxford to cut what we in the north call the Groaning Cheese in the middle, when the babe is born, and to so proceed with the cutting as by degrees to form with it a large kind of ring, through which the child is passed on the christening day." "As thin as Banbury Cheese" was a favourite simile with our ancestors: "Our lands and glebes are clipped and pared to become as thin as Banbury Cheese."

A Welsh Rabbit, which is practically Cheese-toast, is popularly so named after a jocular fashion, much the same as a "Norfolk capon," or red herring, or "Glasgow magistrate." Similarly an Essex lion is a calf, a Field Lane duck is a baked sheep's head, and potatoes are Irish plums, or Irish apricots. "Rosted Cheese," wrote Dr. Tobias Venner (*Via Recta ad vitam longam*, 1620), "is more meete to entise a mouse or rat into a trap than to be received into the bodie, for it corrupteth the meats in the stomacke, breedeth adust cholericke humours, and sendeth up from the stomacke putrid vapours, and noysome fumes which greatly offend the head, and corrupt the breath." "To conclude, (he adds), "the much eating of Cheese is onely convenient for rustick people, and such as have very strong stomackes, and that also use great exercise." So much for the old author! *Per contra*

we read in *Pickwick* what Charles Dickens thought on the subject: "A couple of Mrs. Bardell's most particular acquaintance had just stepped in at her house in Goswell Street to have a quiet cup of tea, and a little warm supper of a couple of sets of pettitoes, and some toasted Cheese. The said Cheese was simmering, and browning away most delightfully in a little Dutch oven before the fire, and the pettitoes were getting on deliciously in a little tin saucepan on the hob."

"Though Welsh Rabbit be so called, yet no one knoweth well why ye name be added," said Mrs. Glasse. The Welsh Rabbit, if it has ever been a local dish (the name may possibly be Gaelic), has never certainly within the knowledge, or memory of present man been a Welsh dish. It was a special attribute of the London Club House, or Tavern, of the old school. Three or four Welsh Rabbits apiece were a fair allowance as supper for a man of average appetite; and our great-grandfathers ate them, and went (or were carried) to bed, and slept none the worse, nor dreamed of gout, or dyspepsia. In those days every Tavern of London had its Welsh-Rabbit maker, whilst the price of this dish was eighteenpence. The cook brought Cheese-grater, hard bits of stale Cheese, thick slices of stale bread three or four days old, a pat of fresh butter, a mustard pot, and a gill of old ale. Into a clean saucepan went the ale, and it was quickly brought to a boiling point; the Cheese, first grated fine, went in next, followed by the butter, and the mustard. For some persons the bread was toasted, for others merely warmed in the oven; and on this the seething mass was poured, and then immediately placed before the eater. Such is the only genuine formula for making a Welsh Rabbit. A modern cookery book will order to 'melt slices of rich Cheese,' evidently without knowing that Cheese, to be mixed thoroughly with the other ingredients, and to be rendered digestible by thorough cooking, must be grated. Slices of melted Cheese will mix with nothing, and would rapidly cool into a capital imitation of shoe-leather."

New Cheese has some acid reaction, but by degrees, as the Cheese ripens, this disappears. Some of the casein begins to decompose, and evolves ammonia, which neutralizes the acid of the Cheese; likewise the fatty acids combine with the ammonia, and become neutral. If the fermentative ripening of Cheese goes on to actual putrefaction, then poisonous products become developed, and may be mischievously taken up into the blood. But certain

kinds of Cheese, when only partially decayed, will start a useful digestive fermentation in the contents of the stomach, after a full meal, just as sour leaven when introduced into sweet dough, will cause the whole mass to ferment; and therefore it is that the taking a small portion of Cheese, partly decayed (but not putrid), at the end of an ample dinner, will promote the better digestion of the whole meal. Old Cheese can scarcely be discerned to be the same as when it was new. Matthiolus (1570), was of opinion that only then is it good for gouty persons, being also applied outwardly to the parts where they feel their great pains; some persons have been instanced who by the use thereof have been recovered. Dr. Haig says: "No one has, I believe, found any xanthin, or uric acid, in milk, or Cheese."

To summarize the matter, Cheese may be eaten for two distinct purposes: either for the general sustenance of the body as a food abundant in animal nourishment (casein), and warming fat, with milk sugar; or as a sort of digestive condiment, taken, as it were, in morsel form just at the end of the usual fare, as is customary at old-fashioned dinner tables, with a ripe Cheese in a tasty stage of decay, and mould. The vegetable moulds of Cheese are *Aspergillus glaucus*, blue and green; *Sporindonema casei*, red; and the Cheese mite is an *Acarus*. The savoury principle of Cheese, a chemical oxide termed "leucine," has of all foodstuffs the highest sapidity.

"Mice," wrote old Fuller, "are the best tasters of the tenderest Cheese, and have given their verdict for the goodness of the Welsh." Horace Smith tells a little story which is appropriate in this respect: "'My dear children,' said an old rat to his young family, 'the infirmities of age are pressing so heavily upon me that I have determined to dedicate the short remainder of my days to mortification and penance, in a narrow and lonely hole which I have lately discovered; but let me not interfere with your juvenile enjoyments: youth is the season for pleasure: be happy therefore, and obey my last injunction, never to come near me in my retreat! God bless you all!' Deeply affected, whilst snivelling audibly, and wiping his paternal eye with his tail, the old rat withdrew, and was seen no more for several days, when his youngest daughter, moved rather by filial affection than by that sense of curiosity which is attributed to her sex,

stole to his cell of mortification, which turned out to be a cavity made by his own teeth in the choice substance of an enormous Cheshire Cheese."

" The farmer's daughter hath soft brown hair,
(Butter and eggs, and a pound of cheese.)
And I met with this ballad I can't say where,
Which wholly consisted of lines like these :
(Butter, and eggs, and a pound of cheese.) "
C. S. Calverley.—Fly Leaves.

" I be most mortal 'ungry," says the rustic cottager of Devon in his peasant speech ; " I can ayte a güde hulch ov burd an' cheese, wan za big's my tu vistes." Some famous gourmet has remarked that dinner without Cheese is like a woman with only one eye.

A Cheese cake is a pastry cake filled in its middle with a custard of soft curds, sugar, egg, butter, and spice. This sort of cake is first mentioned in the Latin work *De re Rustică*, ascribed to Cato, the elder, of Utica. He simply terms it " Placenta," which is the Latin word for a cake in general, and not for any particular cake. Cheese in connection with such a cake does not mean ripe Cheese in the ordinary sense, but freshly-pressed curds, or casein. In ancient Rome such cakes were sometimes made of large size, as they are in Germany at the present time. Cheese cakes have a basis of flake dough, or puff paste, shaped like a small, flat saucer, which contains the mixed custard.

Sydney Smith, when writing to Master Humphrey Mildmay (April, 1837), from London, said : " In the Greek war the surgeons used Cheese and wine for their ointments ; and in Henry the Eighth's time cobbler's wax, and rust of iron were the ingredients ; so, you see, it's of some advantage to be living in Berkeley Square, Anno Domini 1837."

A few years back there was current a cockney slang expression, " Quite the Cheese." It actually originated in India, where the Hindustan word " *chiz* " (thing,) is thus applied : " quite the thing " runs as the true phrase there.

CHERRY. (*And see* FRUIT.)

OUR cultivated Cherry (*Cerasus*) dates from the time of Henry the Eighth. A London street cry in the fifteenth century was " Cherries on the ryse," (or on twigs), but these were probably

the produce of the Wild Cherry. From the fruit of different varieties of the Cherry, several highly-esteemed cordials are prepared: the Maraschino of Italy, the Ratafia of France, the Kirschwasser of Germany, and our Cherry Brandy. "Cherry Bounce," again, called also Cherry Cordial, is a popular liqueur consisting of burnt brandy in which Cherries have been steeped, some sugar being added. "Yea, of Cherry Bounce *quantum suff.*, and old Oporto a couple of magnums, that's my physic;" (*Secrets Worth Knowing*). The kernels of Cherry stones contain a basis of prussic acid. From the bark of the tree exudes a gum which is equal in value to gum arabic. Cherry-water, as concocted from Cherry-juice fermented, is excellent for dispelling the nausea of a disturbed stomach through tardy digestion, or because of heavy food. Large quantities of this "Kirschwasser" are made in the Black Forest of Germany, and Switzerland, small, black fruit being used, together with the stones, which furnish the said minimum quantity of prussic acid. Both this cordial, and our Cherry Brandy (when the crushed stones have been included) are very useful against stomach sickness, and flatulent distress.

Among other supposed causes of appendicitis (which is now such a common and serious ailment, requiring surgical aid to remove the obstruction) impacted Cherry-stones have to bear the brunt of much obloquy; but the truth is that in rural districts, where country folk often take no pains to separate the stones when eating Cherries, precisely there (many Cherry-stones being swallowed, and occupying the intestines) appendicitis is rare. Most commonly a bacillus (*B. coli communis*) is encountered within the appendix as giving the obstructive trouble, and causing septic inflammation. The colon must be well washed out, and cold vinegar compresses applied over the whole abdomen, renewing them every half-hour; also soft bland laxatives may be given, such as pulp of stewed prunes, bread made with baking powder, liquorice lozenges, and antiseptic peppermints. Cherries, as well as some other fruits, tend to lessen the formation of uric acid in gouty subjects by the reason of their quinic acid. The French distil from Cherries a liqueur known as "Eau de Cerises"; whilst the Italians prepare from a Cherry called Marasca the liqueur noted as "Marasquin."

In former days, about Kent on Easter Monday, "pudding pies and Cherry beer" were much in vogue; travellers by the

stage coach down the Canterbury Road were invited at every stopping-place to partake of this fare. "May Duke Cherries" was one of the old London cries; and "Cherry Pie" is a name given to the Garden Heliotrope because of its scent similar to that of the fruit. The late Queen Victoria took care that remarkably fine Cherries should be grown at Frogmore, and ordered that some of these should be served at luncheon as often as possible. Cherry sauce used to be so highly esteemed that for many years it was supplied at every Royal luncheon, and dinner, no matter what the sweets might be. It was made thus: Put three parts of a bottle of Claret in a high copper pan, with some white sugar, and a stick of cinnamon; bring it to the boil, throw in some Cherries not over-ripe, and simmer for ten minutes, removing the scum; then lift out the cinnamon, and thicken the sauce with a little arrowroot mixed with cold water; the sauce should not be too thick, but should freely coat the spoon, and it is then ready for use. When fresh Cherries are out of season the bottled fruit must be employed, taking some of the juice from the bottle, and mixing it with an equal quantity of Claret. Freshly-gathered Cherries (to be made into ice for dinner) were always approved of at Queen Victoria's table, and many of them were constantly preserved in large jars by the Royal confectioners to come into use at dessert during the winter months. Morellas were chiefly chosen for the purpose, and were likewise much esteemed in brandy.

Cherry soup (*Potage aux Cerises*) is popular in North Germany. It is made there with the acid Cherries, called Vistula, or Weichsel, and known in England as Kentish Pie Cherries. These, when stewed with cinnamon and lemon rind, are divided into three parts: One is reserved to be stoned, and put whole into the soup; the other two parts are first boiled with some water bound with a "roux" of flour, and then passed through the tammy, adding sugar to taste. Pound the Cherry stones, and heat them with two or three glassfuls of red wine just to boiling; strain through a linen cloth, and add the extract to the soup, which may be eaten with sponge cakes.

For making Cherry jam the common Cherries are to be preferred, as they give a much better flavour than the sweet Cherries. "There is an outlandish proverb," saith old Fuller, "'He that eateth Cherries with noblemen shall have his eyes spurted out with the stones'; but it fixeth no fault in the fruit,

the expression being metaphorical." Quoth Dr. Samuel Johnson in his wisdom, "It is the Colossus who, when he tries, can cut the best heads upon Cherry stones as well as hew statues out of the rock." Pepys has told (November 2nd, 1667) that "when at the King's Playhouse it was observable how a gentleman of good habit, sitting just before us, eating some Cherries in the midst of the play, did drop down as dead, being choked; but, with much ado, Orange Moll did thrust her finger down his throat, and brought him to life again."

CHESTNUT.

Of all known Nuts the Spanish Chestnut (Stover Nut, or Meat Nut) is the most farinaceous, or starchy, and the least oily, so that it is more easy of digestion than any other. Italian Chestnut Cakes contain 40 per cent of nutritious matter, and Chestnut flour, when properly prepared, are capital food for children. The ripe Chestnut possesses a fine creamy flavour, and if roasted this Nut becomes almost aromatic. The diet of Italian poor people consists chiefly of Chestnuts during the autumn and winter, when these are eaten roasted, or prepared like a stew with gravy. Likewise in Corea the Chestnut has almost the same popular place for food as the potato occupies with the Irish. To make a Chestnut purée, take two pounds of good sound Chestnuts, cut the tops off, and put the nuts to bake for about twenty minutes; then remove the shells, and skins; put the nuts into a stewpan, with enough light stock to make of a pale lemon shade; add salt, and some castor sugar, also a pat of butter; simmer till the nuts are tender, then pound them, and rub them through a fine wire sieve, mixing them with a little cream (and anisette, if liked); work into a smooth paste, put it into a forcing-bag with a large rose pipe, and use.

For convalescents after a protracted illness, the French make a chocolate of sweet Chestnuts which is highly restorative. In olden times Chestnuts were common rations supplied to our soldiers; and when it seemed probable that a castle would be besieged, out went the soldiers and laid violent hands on all the stores of Chestnuts within ready reach. Nowadays in Italy, and elsewhere on the Continent, meat having become a luxury, Chestnuts are the staple food of the people. "Hodge-Podge," or "Hotch-Potch," is a ragoût made with Chestnuts. For

Chestnut soup (according to an old Italian recipe), "finely chop two small onions, one carrot, two leeks, and a quarter stick of celery; fry with butter until browned; add one quart of stock, three or four cloves, and salt to taste; stew over a slow fire for one hour. Take three or four dozen Chestnuts, according to size, and peel off the outside husk; then place them in an ordinary stewpan, stirring them about until they are sufficiently cooked for removal of the second envelope, or shell; stew them for half-an-hour in half the prepared liquor; put apart some whole Chestnuts to garnish the soup; chop the remainder, and strain them through a sieve with the liquor they have been boiled in; add the remainder of the prepared stock; stew over a slow fire for six or seven minutes; place the whole Chestnuts in the tureen, and pour the soup over." Steak and Chestnuts is a capital food combination for completing recovery after a long illness. Boil one pound of Chestnuts until they are soft; remove the shells, and husks, and make the nuts smooth with a wooden spoon; add to them one pound of very finely minced juicy beef (rejecting all skin, gristle, etc.); season the mixture with salt, pepper (red and white), and mustard to taste; also add half-an-ounce of grated parsley, one shalot (finely minced), and about a dessertspoonful of finely-scraped horse-radish; make it into a paste with four or five eggs; press it rather firmly down in a deep dish, and make pretty devices on the top; lay little lumps of butter (about two ounces altogether) here and there, and either bake it in a good hot oven, or roast it before the fire; it should be of a warm, brown colour, and must be served very hot.

Professor Andrew Smith, of New York, found that roasted Chestnuts, when eaten, signally lessen the quantity of albumin in the urine of patients suffering from what is known as Bright's disease of the kidneys, this effect being largely due to the tannic acid which the Chestnuts contain. "Take some Chestnuts, and make a small incision in the skin of each one; throw them into boiling water, and let them remain until tender; remove the shells, and skins; dry the Chestnuts in the oven, and afterwards reduce them to powder by pounding in a mortar; the powder may be made hot again, and then served as a vegetable." Similarly at St. Petersburg it has been shown that roasted Italian Chestnuts have a marked effect in diminishing the albumin excreted in the urine of such patients. A good way to cook these

Chestnuts is to boil them for twenty minutes, and then place them in a Dutch oven for five more minutes. "Zounds," cried Phutatorius (*Tristram Shandy*, Cap. xxvii., Sterne), "when a roasted chestnut, piping hot, rolled from the table into that particular aperture of his small clothes, for which—to the shame of our language be it spoke,—there is no chaste word throughout all *Johnson's Dictionary*; that particular aperture which the laws of decorum do strictly require like the Temple of Janus (in peace, at least) to be universally shut up." Americans consider sweet Chestnuts, and likewise leaves from the tree, excellent for staying the paroxysms of whooping cough. Continental confectioners dip the cooked nuts into clarified sugar, converting them thus into sweetmeats. The Chestnuts contain 50 per cent of starch. Californian Indians make a very liberal use for food purposes of the Horse Chestnut (*Hippocastaneus æsculus*), from which nuts they produce both porridge and bread, the flour being first well washed so as to extract the tannin from it, and then boiled like oatmeal; or it is mixed with red clay so that the oil may be absorbed, and afterwards it is baked in loaves. In New England, as well as in this country, the Horse Chestnut, by its nut, supplies a most serviceable medicine against chronic constipation of the bowels, and for the cure of sluggish piles.

CHICORY. (*See* COFFEE.)

THE Wild Chicory, or Succory (*Cichorium*), is an English roadside plant, with flowers (white, or blue), and which is also called "Turnsole," a Sunflower. Its fresh root is bitter, with a milky juice which is somewhat aperient, and slightly sedative; whilst on good authority the plant has been pronounced useful against pulmonary consumption. In Germany it is known as Wegwort, "waiting on the way," being by repute a metamorphosed Princess watching for her faithless lover. When cultivated, the root grows to be large, and constitutes Chicory, as used abundantly in France for blending with the coffee berry. This plant when wild was known to the Romans in the days of Horace, being then eaten as a vegetable, or in salads:

> —"Me pascunt olivæ,
> Me cichorea, levesque malvæ."

Virgil also tells of the *Amaris intuba fibris*. And in modern

days Tusser (1573), who was so well acquainted with the virtues and uses of our homely herbs, rhymes concerning "Endive and Suckerie" thus :—

> "Cold herbes in the garden for agues that burne,
> That ouer strong heate to good temper may turn."

The "Violet plates," (or tablets), which were a favourite confection in the days of the merry monarch Charles the Second, were made not simply of sweet violets, but also the heavenly blue of Succory flowers entered into their composition. "Violet plate," it was said by a contemporary writer, "is most pleasant and wholesome, and especially it comforteth the heart, and inward parts." "The Violet is good to don in potage." The Succory was pronounced by Parkinson (who was physician to both Charles and James), to be "a fine cleansing, jovial plant." Its tap-root is cultivated in France.

CHOCOLATE. (*See* Cocoa.)

Chocolate is a paste, or cake, composed of the kernels of the *Theobroma cacao* fruit, ground up, and combined with sugar, vanilla, cloves, cinnamon, and other flavouring substances: it is, in fact, ground Cocoa from which the fat has not been removed, mixed with white sugar, starch, and flavourings. The inferior varieties are made from unfermented beans. The Chocolate tree is the Cacao tree, and although its product bears the name of Cocoa, it is foreign altogether to the Cocoa-nut tree from which Cocoa-nuts are got. Cocoa, which should be spelt Cacao, is commonly associated by mistake with the Cocoa Palm, or Cocoa-nut Palm. Its genus is really that of the *Cacao theobroma* (food for the gods), the tree being a native of America, from Mexico to Peru. Its fruit occurs in egg-shaped pods, each of which contains from twenty-five to a hundred seeds imbedded in sweetish pulp. These seeds are the Cocoa beans, which become, when divested of their husks, Cocoa nibs; and when ground into a paste, sweetened, and flavoured, they make Chocolate, as already stated. The oil obtained from the seeds when expressed, yields a fat, which does not become rancid, and is known as Cocoa butter, being much used in pharmacy, because solid at ordinary temperatures. The dry powder of the seeds, after a thorough expression of the oil, is broma. The crude paste is sometimes dried into Cocoa

flakes. Cocoa shells are the husks alone, from which a decoction is occasionally made as a beverage. Each of the above substances (the beans or seeds, the kernels, and the shells) contains the alkaloid theobromine, and is therefore of use as a substitute for tea, or coffee.

Chocolate is the Cocoa powder mixed as described, whilst still containing the oil, ground up together with the sugar and flavourings (thoroughly incorporated) in a mill, and pressed into cakes, slabs, and fanciful devices. A beverage concocted therefrom was the customary breakfast drink in the early part of the eighteenth century. By the *Tatler* of that date we are told that the fops of the period took their Chocolate in their bedrooms, clad in their dressing-gowns, ("and green tea two hours after"). Chocolate was first used as a beverage in England about 1657, and was very popular in the time of Charles the Second. But Cacao (the Chocolate fruit) had been employed for making a beverage therefrom by the Mexicans for ages before their country was conquered by the Spaniards.

There are four widely-separated vegetable products which are variously comprehended under the names *Cacao*, *Cocoa*, *Coca*, and *Coco*. Concerning the first of these, Cacao, a full explanation has been given above. The second, or Cocoa-nut, is produced by the Cocoa-nut Palm, and is not connected in any way with the beverages Chocolate, and Cocoa (properly Cacao). This is a large tree bearing bunches of Cocoa-nuts (filled with a milk) from ten to twenty in number, within rough, fibrous, woody outer coats. The third, Coca, or Cuca, is produced from a shrub, native in the Andes, with brilliant green leaves, which create, when chewed, a sense of warmth in the mouth, whilst serving remarkably to stave off hunger, and to confer a wonderful power of enduring bodily fatigue. About the fourth, Coco, very little is known; it yields a root which, when suitably cooked, is not unlike the sweet potato.

Again, the Kola, or Java nut (*Sterculia acuminata*), is a tree of Western Africa, producing leaves which are now employed to a large extent as a nervine stimulant, and with marvellous powers of enabling fatigue to be sustained for a long time together. But during the stage of subsequent reaction the vital powers sometimes become much depressed, and the heart's action disturbed. Kola contains a considerably larger amount of caffeine than is found in the finest Mocha coffee. This caffeine

is undoubtedly a useful drug when employed judiciously in suitable cases, and in appropriate doses ; but if taken habitually, or in considerable quantities, it is calculated to stimulate the nerve centres in harmful excess.

Cocoa of itself, without the addition of Kola, or Cuca, is a sufficiently restorative, and sustaining food, which, like good wine, "needs no bush." "Johnny Cope," says the *British Baker* (1902), "carried with him a supply of Chocolate when he went on his disastrous campaign which ended at Preston Pans. The Highlanders at Sheriffmuir, on putting the English to rout, looted the carriage of the Commander-in-chief, wherein were found several rolls of brown material which was put into use as an ointment for dressing wounds ; and the find was actually sold as a specific for wounds under the name of 'Johnny Cope's salve.' A soldier showed some of it to a friend, who, to his utter dismay, put it into his mouth, and ate it. The friend was of more travelled experience, and had made the acquaintance of Chocolate before then."

Spanish ladies of the new world love Chocolate to distraction, so much so that, not content to take it several times a day, they even carry it to church with them. This practice has often called forth the censure of the clergy, but they have finished by winking at it, declaring that Chocolate made with water does not break a fast, and extending thus to the penitents the sanction of the ancient adage, "*Liquidum non frangit jejunium.*" Brillat Savarin declares that if, after a copious lunch, a large cupful of good Chocolate is taken, everything will have been digested three hours subsequently, and the appetite will be again in good order for dinner. Persons who drink Chocolate enjoy an almost constantly good state of health, and are but little subject to the crowd of small troubles which spoil the happiness of life. To make Chocolate for immediate use, about an ounce and a half should be sufficient for a cup, and dissolved slowly in water heated over the fire, constantly stirring this with a wooden spoon. It must be allowed to boil gently for a quarter of an hour so as to give it consistence, and this must be taken hot. The Chocolate should be served in cups, and be sufficiently thick to be eaten with a small spoon, rather than drunk. It was used in this way by the Mexicans, except that they took it with golden spoons. "Chocolate in a red cup and saucer, to be eaten with a golden spoon, is, as we have tested, æsthetical perfection, both taste

and sight being much gratified with the combination." The "Chocolate House" was in Mid-English days an established place of public entertainment. As told in *The Tatler*, "Lisander has been twice a day at the Chocolate House."

For "Cocoa Cordial," take half a teaspoonful of Dutch Cocoa, with boiling water, and two lumps of loaf sugar, also two tablespoonfuls of old Port wine; put the Cocoa and sugar into a china cup, and pour directly upon them some boiling water, then add the wine, making in all an ordinary cupful; serve it at once. This is an excellent drink for anyone chilled, or exhausted, or to take after a bath.

The Cacao tree, or Cacaw tree, bears nuts of which the bitterness makes amends for the oily grossness of the kernels when converted into Chocolate, "carrying this off by strengthening the bowels." "So great a value do the people of Mexico, Cuba, and Jamaica attach to these nuts that they do use the kernels instead of money both in their traffic, and rewards." In the *Natural History of Chocolate* (London, 1682) its wonderful use as a sexual restorative is dwelt on explicitly. "Had Rachel known Chocolate she would not have purchas'd mandrakes for Jacob. If the amorous and martial Turk should ever taste it he would despise his opium."

The Palm tree (*Cocos nucifera*), which produces what are most commonly known as Cocoa-nuts, is common almost everywhere within the tropics. While the nut is growing it contains nothing but a milky liquor, but as it ripens the kernel settles like soft cream around the inside of the shell, and increases in substance until it becomes hard. The milk whilst young is very pleasant to drink, but becomes sharper, and more cooling when older. The kernel is sweet, and very nourishing, but not easy to be digested. The milk of the Cocoa-nut contains sugar, gum, albumin, and some mineral salts. The kernel consists of fatty matter (from which an oil is to be obtained); also it comprises albumin, gluten, sugar, mineral salts, and water. Grated Cocoa-nut with fine sugar sifted over it makes an admirable and useful dessert dish. An excellent vegetable butter is to be had from the fresh Cocoa-nut, which can take the place with persons of poor digestive powers as to fatty matters—of butter, dripping, margarine, or lard; this vegetable butter is tasteless, and when melted does not form any sediment. A Cocoa-nut weighing one and a quarter pounds contains a quarter of a pound of fat,

so that as a source of fat it is "equivalent to butter at eightpence a pound."

For making "Cocoa-nut drops," to a grated Cocoa-nut add half its weight in sugar, and the white of one egg beaten stiff; drop small pieces on a buttered paper, and sift sugar over them; bake for fifteen minutes in a slow oven. Again, for "Cocoa-nut toffee," take a fresh Cocoa-nut, and a pound of sugar; grate the interior of the nut, and boil the sugar with its milk mixed with a cupful of water; when nice and thick add the grated Cocoa-nut; stir all the time till you see it coming off quite clear from the sides, then remove from the fire; grease the dishes on which you pour it; mark it out in squares with the back of a knife, and let it get cold, when it will be pronounced "very good."

CIDER. (*See* APPLE.)

CIDER (or "Cyder," an early form of the word) is the juice of apples which has been fermented advisedly. It contains about the lowest percentage of alcohol of all popular fermented drinks. Unlike beer, or any other malt liquor, it acts as an antidote to gout, and to uric acid rheumatism. Vintage apples, as used for making Cider, contain more tannin than the table fruit, and this imparts tonic properties to the liquor apart from its general astringent principle. Moreover, Cider districts enjoy a remarkable immunity from disorders of a choleraic nature, and it is within the repeated experience of Cider drinkers that gout and rheumatism fly before this liquor. Chemically the sub-acid juices of the apples become converted by combustion within the body into alkaline salts, which neutralize all the gouty elements wherewith they meet. A good Cider contains a considerable quantity of potash, and soda, so that from drinking it there is almost no acid resultant within the body. "It will beggar a physitian," wrote Austen, "to live where Cider and Perry are of general use." In making *sweet* Cider the fermentation is artificially arrested, so that the amount of alcohol which becomes created is very small, and some free sugar remains still in solution; therefore this sweet Cider is not so wholesome for rheumatic persons as the rough Cider with its fermentation finished, and no sugar remaining. Medical testimony goes to show that in countries and districts where natural Cider is the common beverage, stone in the bladder is

quite unknown. A series of enquiries among the doctors of Normandy (which is a great apple country, where Cider is the chief, if not the sole, drink) has established the fact that not a single case of the nature in question had been met with there throughout forty years; so that it may fairly be credited that the habitual use of natural unsweetened Cider serves to keep held in solution materials which are otherwise liable to be separated, and deposited in a sedimentary form by the kidneys. Again, Cider drinkers during epidemics of cholera have been found to singularly escape the disease, Cider being powerfully antiseptic because of its methyl-aldehyde.

Nowhere is the subtle, time-honoured, fragrant perfume of the apple more noticeable than when its expressed juice is being wooed into Cider. There is something peculiarly national in the sweet, rich, fascinating scent, the very same as was inhaled by our ancestors far remote, and "under the influence of which we can see the misty forms of Bard and Druid as they gave their blessing to the sacred apple tree. Again we get a romantic vision of fighting kings, and dauntless chieftains; beneath the shade of hoar apple trees Harold of England stands, and falls; in the calm of orchard lawns by Avalon, the Island of Apples, sleeps Arthur—"*Rex quondam, et Rex futurus.*" It was customary of old for apples to be blest by priests on July 25th; and in the *Manual* of the Church of Sarum a special form of service for this purpose is preserved. Furthermore it is now stated as an incontrovertible fact that cancer is almost a thing unknown among regular Cider drinkers. In Normandy fermented apple-juice is the general beverage of the people; it is locally known as "piquette," being quite pure, and unsweetened, as the simple juice of the fruit diluted. But the doctors there denounce this particular liquor for rheumatic, or gouty persons. In Devonshire the countryfolk distil a coarse kind of spirit from Cider-dregs, calling this "Still-liquors," as locally reputed to be "rare güde physic vur asses and bullicks; 't'ath abin knawed tü cure tha boneshave (sciatica) in man; 'tiz cabbical stüff tü zettee up 'pon a cold night."

"But," writes Evelyn (1729), "to give Cider its true estimation, besides that it costs no fuel to brew it, and that the labour is but once a year, it is good of a thousand kinds, proper for the cure of many diseases, a kind vehicle for any sanative vegetable, or other medical ingredients; that of Pippins a specific for the

consumption; and generally all strong and pleasant Cider excites and cleanses the stomach, strengthens the digestion, and infallibly frees the kidneys and bladder from breeding the gravel, and stone, especially if it be of the genuine Irchin-field Red Strake (the famous Red Strake of Herefordshire, and surnamed the Scudamore's Crab), not omitting how excellently it holds out good many years to improvement if full-body'd and strong, even in the largest and most capacious vessels; so as when for ordinary drink our honest countrymen and citizens shall come to drink it moderately diluted (as now they do six-shilling beer in London and other places) they will find it marvellously conduce to health; and labouring people, where it is so drunk, affirm that they are more strengthen'd for hard work by such Cider than by the very best beer." "Innumerable are the virtues of Cider, as of Apples alone, which being raw-eaten relax the belly, especially the sweet, and their concoction; depress vapours; being roasted, or coddled, are excellent in raw distempers, resist melancholy, spleen, pleurisy, strangury, and, being sweeten'd with sugar, abate inveterate colds. These are the common effects even of raw Apples; but Cider performs it all, and much more, as more active, and pure. In a word, we pronounce it for the most wholesome drink of Europe, as specially sovereign against the scorbute, the stone, spleen, and what not."

Cider nowadays is brought to such perfection at the regular Cider-factories, that not more than 4 per cent of alcohol need be contained in the liquor thus manufactured. Apples are chosen carefully (whereas heretofore the farmers took all, and sundry), the pulp is treated by hydraulic pressure, and the juice runs into barrels with the fermentation accurately regulated, while finally the liquid is filtered through sterilized cotton-wool, and thus the Cider becomes a most safe drink, even for gouty persons; this last fact is of great public importance, seeing that almost everyone is in the present day a victim more or less to uric acid. The chief fruit acid in Ciders is malic, whilst analysis shows also the presence of salicylic acid, formalin, and other chemical constituents. The Latin name was *Pomaceum*. Cider apples were originally introduced by the Normans, and the beverage began to be brewed in 1284. The Hereford orchards were first planted in the time of Charles the First. Old, natural Cider invariably forms a slight deposit, or crust, at the bottom

of the bottle. A bin of Cider over forty years old has been found perfectly sound for drinking.

When apples are late in the season, or dry, for making them into a good apple-tart the addition of a little Cider to the fruit before cooking is a capital thing to do. It is stated in *Kitchen Physic* "that old Martin Johnson, the Puritan Vicar of Dilwyn, Herefordshire (1651–1698), bore impartial testimony as follows: 'This parish, wherein Syder is plentifull, hath, and doth afforde, many people that have and do enjoy this blessing of long life. Neither are the aged here bedridden, or decrepit, as elsewhere, but for the most parte lively, and vigorous. Next to God wee ascribe it to our flourishing orchards; they do yield us plenty of rich and winy liquors, which long experience hath taught do conduce very much to the constant health, and long lives of our inhabitants, the cottagers.'" A wholesome Cider drink for summer use by persons disposed to gout is Skimmery (St. Mary Cup): One bottle of soda-water, one quart of Cider (not sweet), one liqueur-glass of Old Tom, or of good gin highly impregnated with juniper, lemon-peel, borage, or cucumber, but no sugar, and no other ingredient; add ice enough to cool thoroughly. In Wickliffe's version of the New Testament his rendering of Luke i. 15 as to what the angel says to Zacharias, alluding to his promised offspring, runs thus: "He shall not drink wine nor Cyder" (the latter being a variation from "strong drink"). Wickliffe, as representing the English feeling of the thirteenth and fourteenth centuries, clearly viewed Cider much in the same light as the fermented juice of the grape. The Roman poets make no reference to Cider as a drink of their time. It is in French records we meet with the earliest vestige of the Cider-making industry. Our Roger Bacon (1260) talked of Cider and Perry as notable beverages in sea-voyages; he explained that the Cider of his day did not turn sour in crossing the line, and was wonderfully good against sea-sickness. But Tennyson, in the *Voyage of Maeldune*, has powerfully depicted the maddening effects which may follow a riotous indulgence in liquors fermented from apples, and other saccharine fruits :—

"And we came to the Isle of Fruits; all round from the cliffs, and the capes,
Purple or amber dangled a hundred fathoms of grapes;
And the warm melon lay like a sun on the tawny sand;
And the fig ran up from the beach, and rioted over the land.
And the mountain arose like a jewelled throne thro' the fragrant air,
Glowing with all-coloured plums, and with golden masses of pear,
And the crimson, and scarlet of berries that flamed upon bine and vine;
But in every berry and fruit was the poisonous pleasure of wine.

And the peak of the mountain was apples, the hugest that ever were seen,
And they prest, as they grew, on each other, with hardly a leaflet between ;
And all of them redder than rosiest health, or than utterest shame,
And setting, when even descended, the very sunset aflame.
And we stayed three days, and we gorged, and we maddened, till everyone drew
His sword on his fellow to slay him ; and ever they struck, and they slew ;
And myself I had eaten but sparely, and fought till I sundered the fray ;
Then I bade them remember my father's death, and we sailed away."

CINNAMON.

WHAT we employ as Cinnamon from the spice-box consists, when genuine, of the inner bark of shoots from the stocks of a Ceylon tree. This bark contains cinnamic acid, tannin, a particular resin, a volatile fragrant oil, and sugar. The aromatic, and restorative cordial effects of Cinnamon have been long known in this country. It was freely given in England during the epidemic scourges of the early and middle centuries, nearly every Monastery keeping a store of the medicament for ready use. The monks administered it in fever, dysentery, and contagious diseases. Of late it has been shown in the Pasteur Laboratory at Paris that Cinnamon actually possesses a special power of destroying bacterial germs of diseases. M. Chamberland declares, "No disease germ can long resist the antiseptic power of essence of Cinnamon, which is as effective to destroy microbes as corrosive sublimate." One of the assistants at the Pasteur Institute in Paris some years ago, after many experiments with other probable germicides which proved unsuccessful, found at last that the moment the aroma of the essential oil of true Cinnamon (not cassia) came in contact with microbes in a glass tube, they fell down in shoals to the bottom of the tube, either stupefied, or killed. (He observed the same thing happen, but more slowly, if the tube was exposed simply to the rays of brilliant sunshine.) It is an established fact that those persons who inhabit Cinnamon districts have an immunity from malarious diseases. And our ancestors, as it would appear, hit upon a valuable preservative against microbes when they infused Cinnamon (with other spices) in their mulled drinks. By its warming astringency it exercises cordial properties which are most useful in arresting passive diarrhœa, and in relieving flatulent, cold indigestion ; from ten to twenty grains of the powdered bark may be given for a dose in such cases. Against

ill odours from decayed stumps of carious teeth, within a foul-smelling mouth, this should be rinsed out each night and morning with Cinnamon-water, freshly prepared by adding half a teaspoonful of genuine Cinnamon essence to half a toilet-tumblerful of water; thereby making an effective mouth-wash, and helping materially to prevent absorption into the blood of injurious septic matters which would engender rheumatism, and kindred toxic maladies. Another method for effecting the same salutary end may be copied from what used to be, and perhaps still is, practised by school-boys here and there—that of smoking pieces of Cinnamon bark instead of cigars, which would betray the offender by their forbidden nicotian odour; but these fragrant substitutes are hard to "draw."

The volatile oil of Cinnamon has to be procured from the bark, and makes with spirit a convenient essence, or tincture; being useful further for preparing an aromatic water of Cinnamon. For a sick, qualmish stomach either form of Cinnamon is an excellent remedy. Cinnamon bark by its astringency will also serve to stay bleeding from the bowels, likewise nose-bleeding, and uterine fluxes. A teaspoonful of the bruised and powdered bark should be infused in half a pint of boiling water, and a tablespoonful of the same, when cool, is to be taken frequently.

Parenthetically it may be told here that, though not esculent, except when made into a tea by infusion with boiling water, one of our very common English wayside weeds, the small Shepherd's Purse (*Bursa Capsella Pastoris*), is likewise singularly useful for arresting bleedings, and floodings; it is eminent among our most reliable remedies for staying fluxes of blood. The herb contains a tannate, and bursinic acid, as its active medicinal principles. Its tea should be made from the fresh plant, first bruised, and is to be taken a teacupful at a time every two, three, or four hours, as required. "Shepherd's Purse stayeth bleeding in any part of the body, whether the juice thereof be drunk, or whether it be used poultice-like, or in bath, or any way else." It further bears the name of Poor Man's Permacetty, "the sovereignst remedy for bruises." And in some parts of England the Shepherd's Purse is known as "Clapper Pouch," alluding to the licensed begging of lepers at our crossways in olden times, with a bell, and a clapper. They would call the attention of passers-by with the bell, or with the clapper, and would receive from them alms in a cup,

or basin, at the end of a long pole. The clapper was an instrument made of two or three little boards which could be noisily rattled together so as to incite notice. Thus the wretched lepers obtained the name of Rattle Pouches, which appellation has become extended to this small plant, bearing a reference to the diminutive purses which it hangs out along the pathway. Lady Paget, when interviewing at Bologna Count Mattæi, of the "seven marvellous medicines," gathered the knowledge that this Shepherd's Purse furnishes the so-called "blue electricity," of surpassing virtue for controlling hæmorrhages. The juices expressed from the fresh herb can be simmered down with sugar until thickened to a liquid extract, and taken thus, one teaspoonful for the dose. English druggists now prepare, and dispense, a fluid extract of this herb. Its popular names are "Case Weed," "Pickpocket," "Mother's Heart," and "Toy-wort."

The term Cinnamon is connected with "*quineh*," a reed, or cane. Dr. Tobias Venner wrote (1620) in his *Recta via ad vitam longam* :—"From one pound of Cinnamon (grossly beaten), a pound of white sugar, a gallon of sack, and a quart of rosewater, steeped together for twenty-four hours, may be drawne by distillation a water of singular efficacie against sowning (swooning) debilitie of the spirit, and the princepall parte. Wherefor I wish every man that is respective of his health and life, especially such as are of weake nature, never to be without it, and to take now and then a spoonfull or two, especially when occasion shall instant the use of it; then take powder of Synamome, and temper it with red wyne." "For fragrance of smell, and jucunditie of taste Cinnamon excelleth all other spices; it strengtheneth the stomacke, preventeth and correcteth the putrefaction of humors, resisteth poysons, exceedingly comforteth the principall parts, especially the heart, and liver, and reuiueth the spirits. It is convenient for all bodies, especially for them that are of cold and moyst temperature, and that have weake stomackes." St. Francis of Sales has said, in his *Devout Life*, with respect to the labour of teaching, "It refreshes and revives the heart by the sweetness it brings to those who are engaged in it, as the Cinnamon does in Arabia Felix to them who are laden therewith."

For a dozen or more years past Cinnamon has been successfully employed as a specific abortive of the influenza poison, only

provided its free use is commenced medicinally within a time-limit of twenty-four hours after the first access of an attack; otherwise the toxication of the whole system has advanced beyond the power of this remedy for scotching the parent virus of the invading disease. "For this purpose," says Dr. J. C. Ross, of Manchester, "five drops of the true oil of Cinnamon with a tablespoonful of water, every hour or two, for six or eight doses, will promptly and effectually exterminate the enemy." Again, Dr. Ross has found that when treating scarlet fever by Cinnamon, he escaped the incidence of complications which so frequently occur. He gives a strong decoction of the bark, at first every hour, and then every two hours, until the temperature falls to normal, whilst making the patient also use the decoction as a gargle. Likewise for proving remedial against cancer, Cinnamon has gained credit with Dr. Ross, in accordance with a reputation revived from former days. He reports success from a steady use of the strong decoction, half a pint being taken daily. He orders of this decoction (two pints of boiling water on a pound of stick Cinnamon, boiled slowly down to twenty-five ounces, and poured off without straining) half an ounce, or one ounce, with water.

Cinnamon is also of undoubted benefit for consumptive patients by aborting the bacillary germs, and by preventing the infection therewith of fresh lung portions. The cough and the expectoration improve, the temperature becomes normal, and the weight begins to increase, whilst the number of disease-germs found microscopically in the expectorated matters gradually diminishes. In this way the disease may be limited to small areas, and presently cut off from the general system by the fibrous tissue of cicatrization. Similarly the malady known as mumps (a specific painful swelling of the glands—"parotid"—below the ears, and which is infectious) can be cut short by Cinnamon, if it be administered speedily from the commencement of the attack. It should be given in frequently-repeated doses of strong Cinnamon tea, freshly made, or by sucking concentrated Cinnamon lozenges if swallowing is difficult. The name "mumps" means mumping with a mouth hard to be opened, because of the painfully swollen glands at the sides.

For many generations Cinnamon as a flavouring spice has been used exclusively with sweet dishes, and has been almost entirely excluded by the cook from savoury compositions.

Nowadays it is not uncommonly adulterated by adding ground walnut shells, or frequently Cassia is substituted for the genuine article.

Seeing that the pneumonia, or lung inflammation, which prevails of late, particularly after influenza, is proved to be of a septic type, Cinnamon affords promise of great remedial value as a sure germicide in this serious malady, which is often virulent in its character. In most cases it is due to toxic poisons generated by two or three special microbes, which underlie the whole attack; and therefore germicidal, or antiseptic nourishment is essentially indicated. During the first feverish stage an easy bed, absolute rest, and good nursing are indispensable, and no good purpose can be fulfilled by giving substantial, or very stimulating food. Measures for reducing the fever should be put into effect, such as cool sponging of the body, or perhaps even making use of iced water externally for a robust subject. As a drink, equal parts of whey and egg-water will be very suitable; for the latter, whip up the whites of from two to four eggs to a froth, stirring them presently into a pint of cold water, and finally straining. This albuminate serves to replace the casein of the milk, which has been separated as curd in making the whey. Milk-whey is to be made by adding one part of fresh butter-milk to two parts of warm milk in a saucepan over a slow fire. If a slight stimulant should prove needful, wine-whey may be given, or egg-flip is a good compound for the purpose, being a food as well as a cordial. "Whip up the yolk of a fresh egg, sprinkling a little powdered white sugar on it, and then adding from a teaspoonful to a tablespoonful of whisky, or brandy, and finally pumping soda-water from a syphon upon the mixture in a tumbler." The natural history of pneumonia shows that unless septic complications arise, the inflammatory process comes to an end about the sixth or seventh day, with the salutary occurrence of profuse sweating, or of some diarrhœa, which are efforts to throw off the morbid material out of the system. But pneumonia is always hazardous to elderly persons, especially after influenza; also to intemperate subjects. In the drunkard this seizure is almost of a certainty deadly. Double pneumonia in a drunkard is absolutely fatal: there is no chance for him. But in a young man, or young woman, previously healthy, simple pneumonia is usually recovered from. The particular causative microbe, *Micrococcus lanceolatus*, whilst often present in the mouth, even

of a healthy person, becomes capable under certain conditions of developing this dangerous disease. Unfortunately a sudden collapse is not uncommon even when things seem to be doing well; but as a rule the active symptoms subside as quickly as they manifested themselves. Frequently in aged persons, as the attack progresses, the lungs become obstructed by exudations into the air-cells, and a failure of heart-power ensues. For meeting this grave condition the inhalation of oxygen is all-important, so as to sustain the strength, and the life; also, furthermore, the medicinal administration of Musk is of splendid service in such an emergency. Pneumonia may be of a gouty character, and require alkaline antidotes.

Some years ago *Blackwood's Magazine* told about a gang of thieves, including a soldier and his wife, at Gibraltar, who were discovered (to the astonished delight of an epicurean officer) roasting a stolen pig over a savoury fire kindled of purloined Cinnamon bark.

For a Cinnamon cake, take one cupful of granulated sugar, of butter a piece the size of an egg, one cup of milk, two cups of flour, one teaspoonful of cream of tartar, and half a teaspoonful of bicarbonate of soda; mix in the usual way, but sifting the soda, and the cream of tartar, together with the flour; put in a shallow pan; sprinkle with sugar and Cinnamon, and bake for about fifteen minutes in a moderately hot oven. In the *Arcana Fairfaxiana Manuscripta* (a MS. volume of Apothecaries' Lore, and Housewifery, three centuries old, as used and partly written by the Fairfax family,)—it is commended "for the hiccough" to "drop a single drop of the Oil of Cinnamon on a lump of double refin'd sugar; let it dissolve in the mouth leisurely, then swallow it. This is a most pleasant and agreeable stomach-medicine, which seldom fails."

CLARET. (*See* WINES.)

CLOVES.

CULTIVATED at Penang, and elsewhere, the Clove tree (*Caryophyllus*), belonging to the Myrtle family of plants, produces flower-buds, which whilst yet unexpanded, constitute our Cloves, these having been dried, and imported. They contain a fragrant volatile oil which has the property of lowering nervous irritability, whilst yet acting as a pleasantly stimulating cordial. This oil

consists principally of "eugenin," and "caryophyllin." The eugenic acid gives the strong odour of Cloves, being powerfully anti-putrescent, and antiseptic; it will reduce the sensibility of the skin when applied externally, being mixed with lanolin, or sheep's wool oil, for such a purpose, to relieve eczema, and other eruptive disorders. Cloves also contain tannin, some gum-resin, and woody fibre. Among other reputed antidotes to cancer are Cloves, by reason of their germicidal essence; whilst a similar virtue has attached itself in the popular mind to Cinnamon, Clover, Celandine, Comfrey, and other plant-remedies, because of supposed cures, even in desperate cases, by one or another of these medicaments. But the most recent authoritative pronouncement by experts engaged in persevering research as to the nature and arrest of cancerous disease, denies the existence of special microbes underlying cancer, and concludes that it is a perversion of cell-growth, beginning at first in some single organ, and presently multiplying throughout the system. How to alter the morbid tendency is the crux of the whole matter. Sir William Broadbent, in his address on Medicine at Manchester (1902), put the problem thus: "Nature will sometimes cure cancer spontaneously. How does she do it? This is for us doctors to determine, and to discover by patient research, and watchful observation. May not some particular endowment in common lie at the bottom of all the reputed remedies which have merited respect in their use? Heredity as to the dire disease seems now to be disproved; but hopelessness as to its cure still occupies the rustic mind; so it would appear, at all events in Devon: "Havee a yerd 'bout poor Liza Turner?" "No; what es et?" "Why, tha poor dear sowl hath abin föced tu 'ave 'er buzzum a tüked off, cuz 'er got a cancer in un." "Aw, poor blid! 'er won't live very long now then." "No, I rekkon."

Dr. Burnett has taught (1895) that a too free dietetic use of Cloves will induce albuminuria, like that of Bright's disease. When this disease comes on from other causes, Clove tea, rather strong, infused on the bruised Cloves, will sometimes act curatively, taking half a teacupful two or three times in the day. But if made use of too largely, Cloves will deaden the healthy tone of the stomach, lessen the appetite, and cause inactive constipation of the bowels. Half a tumblerful of quite hot water poured over eight or ten bruised Cloves, in a small muslin

bag, (which should brew for a few minutes on the hob, and then be taken out) will sometimes secure a good night to an uneasy dyspeptic person, if taken immediately before lying down. Cloves are reputed to aid in preventing the deposition of scrofulous tubercle in any of the glands, in the lungs, and in joints. An essence of Cloves bruised in brandy may be prepared, and kept for steady use with this intention, giving a teaspoonful of the essence once a day, with a spoonful or two of water, after some principal meal. Clove tea is excellent for soothing a qualmish stomach, and nausea. In *Pickwick* we read that Sam Weller and Job Trotter, at the Tap of the "Angel Inn," Bury St. Edmunds, "were soon occupied in discussing an exhilarating compound formed by mixing together in a pewter vessel certain quantities of British Hollands, and the fragrant essence of the Clove." Also in *Love's Labour Lost* "a Lemon stuck with Cloves" is told about with relish. Again, for its refreshing odour Miss Jenkyns (in *Cranford*, 1863) stuck an apple full of Cloves so as to be heated, and smell pleasantly in the sick chamber of Miss Brown, a sad sufferer; and "as she put in each Clove she uttered a Johnsonian sentence."

COCHINEAL.

A RICH crimson dye is frequently used for kitchen purposes, being altogether harmless, as obtained from the Cochineal insect, dried, powdered, and infused, or made into a liquid essence. This diminutive, silvery-looking kermes, or insect, of West Indian origin, often supposed by mistake to be a small seed, is in reality the parched, glistening carcase of the *Coccus Cacti*, so called because making the Nobal Cactus its habitat. The insects are found thus in Mexico, New Grenada, and the Grand Canary, where the peasants who manage the nobaleries sweep the same three times in the year with the edge of a feather from the broad lobes of this cactus, or "prickly pear." The diminutive bugs elaborate carmine within themselves; but only the females are of service for this duty, chiefly whilst remaining unpaired. They are swept into bags of muslin, and plunged into boiling water, being afterwards dried in the sun, and packed in convenient parcels; when examined in this state they closely resemble the striped seeds which hang on our "ladygrass" of the fields. The colouring principle of the

Cochineal insect is carminic acid. When infused in water, and pressed, the tiny bodies exude a liquid of the purest ruby tint, perfect and superb; but the dye taken from the second, and third sweepings of the Cactus is styled in the trade "black Cochineal," and is not worth more than one-fifth of the maiden product. Sir Edward Arnold, in stating lately that the insects fill themselves with ruby red liquid from the lobes, and fruit of the Nobal Cactus, was mistaken, seeing that its juices are colourless; and at Kew the director of the Cactus House represents his lack of acquaintance with any Cactus—Nobal, or other—which yields a coloured juice.

Curatively the Cochineal has long been a popular remedy for whooping cough, and it would seem that this confidence is justified by facts. Austrian experimentalists have found that large doses of the Cochineal dye will provoke a violent cough, occurring with spasmodic seizures, and with the characteristic in-drawing "whoop" of the breath; whilst much smaller doses afford singular relief to this distressing trouble when it attacks as epidemic whooping cough. The Cochineal insect also contains, besides fat, and carmine, a principle known as "*tyrosin*," which specifically affects the kidneys; whereby the medicament in much-reduced doses has effectually relieved cases of Bright's disease, and kidney-colic, or congestion. The carmine is found in combination with phosphate, and carbonate of lime, muriate, and phosphate of potash, and stearine (the basis of wax candles). Rouge powder, used both on, and off the stage for giving a roseate complexion to the cheeks, is made by mixing half a pound of prepared chalk with two ounces of freshly-prepared carmine.

COCKLES.

The Cockle (*Cardium*), or "poor man's oyster," is, as is well known, a common, little, bi-valvular shell-fish found buried in the sand of our sea-shores, particularly at Teignmouth, and on the Norfolk Coast. If the shell is viewed "end on," with the two curving beaks uppermost, it represents the shape of a heart (Greek, *Cardia*). The Cockle is discovered nearly all over the world. Its flesh is good, whether raw, pickled, boiled, or roasted, though very inconsiderable in quantity,—a pound of meat to a bushel of shells. This contains marine salts, gelatin, and food constituents of a salutary sort, with medicinal virtues like those

of the lobster. In the *London Pharmacopœia* (1696) Cockles were said to "strengthen the stomach, increase appetite, excite lust, provoke urine, help the cholic, and restore in consumptions." Formerly to "cry Cockles" signified hanging, as simulating the gurgling noise made in the throat by the wretch thus strangled. "Hot Cockles" was a sport, or game, played at Christmas in Elizabethan times; one person knelt, and laid his head, with his eyes covered, in another person's lap, then guessing who struck him.

> "As at Hot Cockles once I laid me down
> I felt the weighty hand of many a clown;
> Buxoma gave a gentler tap, and I
> Quick rose, and read soft mischief in her eye."

The name is derived from the French, "*Hautes coquilles.*"

COCOA (*and see* CHOCOLATE.)

THE seeds of *Theobroma cacao* (a Mexican tree, as already described) contain a considerable quantity of nitrogen, but only from 20 to 30 per cent of animal nourishment (proteids), the remainder being "amides." The seeds are first allowed to ferment, and then roasted, their two halves coming out under pressure in a machine as "Cocoa nibs." When ground between hot rollers these nibs have their oil, or fat, melted, and they become reduced to a fluid condition, which is gradually dried, and then powdered as "soluble Cocoa." Dutch manufacturers add an alkali so as to saponify the fat. "Navy Cocoa" is a pure preparation free altogether from husk. Cocoa contains further some tannin, and is said (by Dr. Haig) to furnish when dry 59 per cent of uric acid, or xanthins, being therefore unsuitable for gouty persons. But the ash of Cocoa is strongly alkaline, consisting chiefly of potash, and phosphoric acid; and the general conclusion is that, whereas out of each hundred pounds of Cocoa no less than three and a half pounds consist of pure vegetable salts, mainly phosphates, of high nutritious value, particularly as alkalies, this article of diet is excellent for those persons who are given to the formation of uric acid as a gouty element. The whole bean is highly sustaining, with its fat, gum, starch, and albumin, besides the theobromin, having all the stimulating effects of tea without any harmful reaction. Cocoa contains nearly one-fifth of its full bulk as pure albumin, and in a state

of fine division for being digested. But the action of Cocoa on the nervous system is much less pronounced than that of tea, or coffee, owing to the comparatively small amount of thein, or caffein, which it contains. In St. James's Street, London, when Queen Anne reigned, there was a famous Chocolate house known as the "Cocoa Tree." Its frequenters were Tories of the strictest school. In the course of time it developed into a more general club. Dr. Garth whilst sitting there had his snuff-box, which was highly ornamented with diamonds, so repeatedly borrowed by the poet Rowe in order to gain notice, that at last he took out his pencil and wrote on the lid the Greek characters Φ (phi.): P (rho.)="Fie, Rowe!"

COD. (*See* FISH *and* OIL.)

THE Cod is found by those who have made competent research to be one of the least digestible fish, though containing but little fat. Its fibre is coarse, and woolly, but Cods' heads baked in the oven are excellent. The ancient Greeks held the Codfish (*Morrhua*) in high estimation, preparing it with grated cheese, vinegar, salt, and oil. Its stomach (which it is said to have the faculty of turning inside out) is mostly found quite empty, and clean, as the result of its enormous digestive power, which habit has, without doubt, a great influence on the flesh, helping to keep it healthy, and well scoured. Cods' sounds, or the swimming bladder, do not dissolve as gelatine on boiling; they are but sparingly nutritious, and more an object of fancy than useful as food. From the fresh livers of Codfish (subjected to a steam bath) is procured the highly curative Cod-liver oil, considered elsewhere in these pages (*see* "OILS"). *Par excellence* it is of the most essential service as a food, and as a medicine, in pulmonary consumption.

Underlying this scourge, which has hitherto proved so widespread, and fatal, there are now found to be special micro-organisms which die out under the modern open-air treatment, together with an abundance of generous food even to excess. Similarly an intensity of light will completely destroy the micro-organisms of erosive skin disease external to the body; but the light for safe concentration upon such diseased surfaces has to be deprived of those rays which burn (red, green, and yellow), whilst it exercises its beneficent action solely by the

chemical rays (blue, violet, and ultra-violet). This grand desideratum has been made feasible by the ingenious method of Dr. Finsen, consisting of a plain glass lens, with a second lens of curved glass, between which glasses is interposed a bright blue solution of sulphate of copper, by which means the heat rays are got rid of. Then the beam of intense cool light is concentrated on the diseased skin through a lens of quartz, which the nurse presses continually over the patch of morbid skin under treatment. In this way the offending microbes can be constantly killed off without discomfort to the sufferer, who has only to lie still under the process for an hour a day. This practice has been well tried, and produces marvellous results of cure. Long years back John of Gaddesden, a famous physician of his time, gained considerable renown for curing John, son of Edward the Second. who had contracted small-pox, by treating him with red light under such means as could then be contrived. He had the Prince laid in a bed with red curtains, red blankets, and a red counterpane, giving the sick man some of the ruddy juice of pome granates to suck, and making him gargle his throat with mulberry wine of a like colour. This doctor, who died in 1561, wrote a quaint book which he called *Rosa Medicinæ*, containing curious old receipts for treating various maladies after the same fashion.

COFFEE AND CHICORY.

The Coffee Berry, which we roast, and grind, for infusing as a stimulating, fragrant, refreshing drink, is got from the *Coffea Arabica* tree, which produces a fruit resembling a cherry, while the Coffee bean corresponds to the stone. This bean consists of two halves enclosed in a husk. Mocha Coffee, from Yemen, in Arabia, is reputed to be the best, being chiefly produced in Guatemala as both the "long berry" and the "short berry." Most "Mysore" Coffee comes from Java, and Ceylon. Brazil Coffee is used for mixing with other varieties. By roasting, the aromatic, highly fragrant oil "caffeol" is developed, to which the grateful odour of freshly-ground Coffee is due, and which is so powerful that a single drop of it will suffice to give fragrance to a whole room. One cause of the superiority of French Coffee, is its admixture with caramel specially prepared for the purpose; another cause being the use of less water in making the beverage.

When Coffee berries are roasted, some portion of the caffein is volatilized, there being a partial change of the sugar (from the berries) into caramel, with a general breaking-up of the aromatic volatile oil, and the albumin cells, causing extrication of gas, and steam, and the development of a very potential and volatile aromatic substance, *methylamine*.

"J'aime le café
Chaud comme l'enfer,
Noir comme le diable,
Et doux comme un ange."

With some persons strong Coffee will provoke an itching state of the skin.

Caffein, the active nervine stimulant, and revivifier in Coffee, being practically synonymous with thein (that of tea), exercises its arousing effect more on the central nervous system, than on the heart, as tea does. It removes the sense of fatigue, but is apt to induce sleeplessness. *Per contra*, for the insomnia of an agitated mind, or body, with a perpetual forcing of ideas on the former, as likewise for alcoholic sleeplessness, a strong infusion of the Coffee berry whilst raw, and unroasted, will prove very helpful; it must be freshly made with Mocha berries, and taken in doses of one tablespoonful at a time every half-hour, until sleep is induced. By Caffein the respiratory movements are made deeper, and more frequent, whilst the heart is indirectly stimulated to beat more forcibly. All experiments go to prove that Coffee-drinking leads to waste of tissue; this berry (the same as tea) is not a muscle-making substance. Whilst the volatile oils of tea tend to dilate the superficial vessels of the skin, and to render it moist (cooling it by rapid evaporation in hot weather), Coffee has an opposite action. Tea-tasters are apt to become jumpy, starting on the slightest sudden noise, tremulous, liable to palpitation, sleeplessness, giddiness, and depression of spirits. Nevertheless, "Tea," said De Quincey, "will always be the beverage of the intellectual." It was the wakeful, exciting effect of Coffee berries, as observed by the Prior of a convent on goats, which first suggested their use as likely to keep the monks from falling asleep at their devotions. This influence of strong Coffee in producing excessive nervous stimulation, is a point well deserving the consideration of total abstainers nowadays. After a while it tends to check the appetite, and to prevent sleep, thereby doing harm to persons liable to neuralgic affections, who

need much sleep. "They should shun Coffee as they would poison," says a leading medical authority. But the infusion does much less harm in very cold climates, also in very hot climates, than it works in England, or in the temperate parts of America. Persons exposed to severe cold, even in this country, are the better for taking Coffee in moderation, and it does not then over-stimulate them. "Cures have been wrought (Republic of Columbia) in the most severe cases of malarious fever, by using the husk of the Coffee bean, which will at times succeed where quinine fails. At first an infusion was made of the Coffee berry within the husk crushed together, and this was used with good results. Afterwards the infusion was made from the Coffee husk alone, with which some hundreds of cases were treated, a cure resulting in every case" (*Lancet*, October, 1902).

Coffee can also be taken in other ways, and in none better than in the form of jelly. "A clear Coffee jelly after dinner is every whit as good as the hot infusion, whilst free from the drawbacks of the latter; moreover, the astringent principles of the Coffee are thus neutralized by the gelatin, which is at the same time an admirable proteid sparer."

Dr. Thudicum advises that it is preferable in making an infusion of Coffee to unite the processes of boiling, and infusing: "Place the amount of Coffee which it is intended to use (less about one-tenth of its bulk, which quantity is to be reserved) into the vessel in which the boiling is to be done, and pour over this the measured quantity of cold water; now heat it to boiling, and keep it thus for some minutes; then take the vessel off the fire, and add to the liquid the reserved tenth part of the Coffee, and stir well in, but without boiling the mixture again; let it stand for a few minutes, and then pour the Coffee on the filter (over a spirit lamp, if wishing it to be quite hot)—the liquid first, and the grounds last."

Cold Coffee infusion made overnight, though a comfortless drink at breakfast, will serve, if needed, as an energizing douche to sluggish intestines, and will stimulate an evacuation of the lower bowel promptly after the meal. Persons in Germany who drink strong, hot Coffee to excess suffer from migraine on waking in the morning, with loathing of food, intense headache, and continual sickness at the stomach. The desire is for darkness, whilst the hands and feet are cold; the pain seldom

ceases until evening. For an attack of similar migraine arising from other causes, it will be found very useful to take hot, strong Coffee by the small teacupful every hour from the time of access until relief is obtained. A claim is advanced that the green, unroasted berries are helpful against disorders of the liver, and kidneys,—two parts of Mocha, and one part of Martinique, and Isle de Bourbon ; put three drachms of these into a tumblerful of cold water overnight, and, after straining the infusion next morning, take it whilst fasting. For obtaining a cordial drink from roasted Coffee, it must be made hot, and strong ; two ounces of the freshly-roasted and freshly-ground berry to a pint of boiling water is the smallest proportion which will give a good result. Three parts of hot milk to one of black Coffee is about the proper proportion for *Café au lait*.

French Coffee has hitherto been made with more or less Chicory in combination, and sometimes with burnt sugar also. This Chicory is the root of the Wild Endive (*Cichorium intybus*), kiln-dried, and broken into fragments ; the process of drying converts its sugar into caramel. As a rule French Coffee contains about one-third of its weight of Chicory, which gives a bitterish taste, and a dark colour to the brew. The chemical constituents of this Chicory, or Succory, are specially *inulin*, and a particular bitter principle not named. The root is fleshy and tapering like a parsnip ; it is cut in pieces, and dried in a slack oven, after which it is again cut in smaller pieces and roasted like Coffee. Chicory when taken habitually, or too freely, causes passive congestion of the veins appertaining to the digestive organs within the abdomen, and a fulness of blood in the head ; indeed, if used in excess it may bring about blindness, because of paralysing the retina of the eyes. The only benefit of quality which Chicory gives to Coffee is an increase of colour and body, but not by possessing any aroma of its own, or any fragrant oil, or stimulating virtue. French writers say it acts in an opposite direction, and is "*contre-stimulante*," serving to correct the excitation caused by the active principles of Coffee ; and that therefore it suits persons who are by nationality sanguineo-bilious, and who would otherwise be liable to habitual tonic constipation caused by their plain Coffee. On the contrary, Chicory is ill-adapted for those persons whose vital energy overpowers itself, and speedily flags ; whilst for lymphatic and bloodless subjects its use should

be forbidden. Johnson (*Chemistry of Common Life*) teaches that "when taken in moderate quantities the ingredients of Chicory are probably not injurious to health, but by prolonged and frequent use they produce heartburn, cramp in the stomach, loss of appetite, acidity, constipation, with intermittent diarrhœa, weakness of the limbs, tremblings, sleeplessness, and a drunken cloudiness of the senses"; "a most formidable list of accusations! At the best, therefore, Chicory as an addition to, or substitute for, Coffee should only be used on infrequent occasions when the price is an object. The late Prince Bismarck stopped one day at an Inn on the borders of the Black Forest, and called for a cup of Chicory. The astonished landlord brought him presently about a gill. "This is all I have in the house," said he. "Are you sure?" asked Bismarck. "Yes, mein herr." "Very well," said the Prince, throwing the stuff away; "now make me some Coffee." After the Essex Rebellion (in *English History*) Queen Elizabeth was much troubled in mind; every new message from the city disturbed her; she frowned on her ladies, and kept a sword always beside her; she touched nothing for two days but a cake, and then disregarded every delicacy of food for a manchet (a roll), and plain *Succory*, or Chicory, pottage.

A well-made infusion of freshly-roasted and ground Coffee is often better as a restorative in fever than alcohol. Again, strong Coffee will frequently prove successful for allaying paroxysms of asthma. Some doctors forbid Coffee in gout, but without any special reason except as regards the cream and sugar served therewith; though Dr. Haig (who evidently has a personal prejudice against each theobromic beverage) declares that Coffee berries contain 70 per cent of uric acid, or xanthins. In Johnson's *Chemistry of Common Life* (1856) the case is told of a gentleman who was attacked by gout at twenty-five years of age, and had it severely at times till he was upwards of fifty, with chalk-stones in the joints of his hands and feet; then the use of Coffee was advised him, and completely prevented any further attacks. The French attribute to free Coffee-drinking their freedom from the gout due to uric acid deposits, with gravel, and derangement of the kidneys. It has not been determined to which of the Coffee constituents this preventive, or curative action is due, but the belief in its efficacy is confirmed by the fact that in a great Coffee-consuming country

like Turkey, such gouty disorders of digestion and excretion are practically unknown.

Coffee (and Cocoa) favour regular action of the bowels more than tea, because not containing so much astringent tannin. Coffee Houses formerly held in Great Britain a position somewhat similar to that of the Club Houses of the present day. Macaulay wrote: "The Coffee House must not be dismissed with a cursory mention." It might, indeed, in his time have been not improperly called a very important political institution. The Coffee Houses were the chief organs through which public opinion in the metropolis vented itself. Every man of the upper and middle classes went daily to his Coffee House, to learn the news, and to discuss it. Every Coffee House had one or more orators, to whose eloquence the crowd listened with admiration, and who soon became (what the journalists of our own time have been often called) a "fourth Estate of the Realm"; this was in the early years of the eighteenth century. In *Pickwick* we read amusingly about Coffee-snuff, as taken at that period in substitution for the stronger weed. "Do you do anything in this way, Sir?" enquired the tall footman (at Bath, of Sam Weller), producing a small snuff-box with a fox's head on the top of it. "Not without sneezing," said Sam. "Why, it *is* difficult I confess, Sir," said the tall footman. "It may be done by degrees, Sir; Coffee is the best practice; I carried Coffee, Sir, for a long time: it looks very like rappee." Again, in another chapter we read concerning Mr. Jackson, the astute clerk of Messrs. Dodson and Fogg, as showing his vulgar sagacity when questioned by Mr. Pickwick about a subpœna which had just been served on that gentleman: "Here Mr. Jackson smiled upon the company, and, applying his left thumb to the tip of his nose, worked a visionary Coffee-mill with his right hand, thereby performing a very graceful piece of pantomime which was familiarly denominated 'taking a grinder.'"

Trelawney has described the making of Turkish Coffee correctly, thus (July, 1900): "A bright charcoal fire was burning in a small stove. Kamalia first took for four persons four handfuls of the small, pale Mocha berries, little bigger than barley; these had been carefully picked, and cleaned; she put them into an iron vessel, where, with admirable quickness and dexterity, they were roasted until their colour was somewhat darkened, but the moisture not exhaled; the over-roasted ones were

picked out, and the remainder, while very hot, put into a large wooden mortar, where they were instantly pounded by another woman. This done, Kamalia passed the powder through a camel-hair cloth, and then re-passed it through a finer cloth. Meantime a Coffee-pot containing exactly four cupfuls of water was boiling; this was taken off, and one cupful poured out; and three cupfuls of the powder (after she had ascertained its impalpability between her finger and thumb) were stirred in with a stick of cinnamon. When replaced on the fire, the pot, if on the point of over-boiling, was taken off, and struck by its heel against the hob, and again put on the fire; this was repeated five or six times. I forgot to mention, she added a very minute piece of mace, not enough to make its flavour distinguishable, and that the Coffee-pot must be of tin, and uncovered, or the decoction cannot form a thick cream on its surface, which it ought to do. After it was taken for the last time from the fire, the cupful of water which had been at first poured out was returned. The Coffee was then carried into the drinking room without being disturbed, and was instantly poured into the cups, where it retained its rich cream on the top. Thus made its exquisite fragrance filled the room, and nothing could be more delicious to the palate."

For sea-sickness a cup of pure Coffee, hot, without milk, or sugar, is often successful. (Dr. Mackern, who has made five or six voyages round the world, speaks in high terms likewise of charcoal, by taking two teaspoonfuls daily for a couple of days before starting on any long voyage; then drinking plenty of hot water on the first day of the voyage, and afterwards resuming the charcoal—one teaspoonful twice a day as before.) For "Coffee jelly," soak half an ounce of gelatine in half a pint of water for an hour until it is dissolved; then add a breakfast-cupful of strong, clear Coffee freshly made; sweeten to taste, and put the mixture into a mould (adding a little brandy, if desired); serve when firm. For "Coffee syrup," choose good Mocha Coffee, and roast it until it acquires a dark cinnamon colour; grind it in a marble mortar, and pass it through a sieve; put the powder into a jug, and pour boiling water over it, stirring it with a spoon; then put two layers of parchment over the jug, and place it in a cool oven until the next day; pour the infusion through a white piece of linen rag over an earthenware dish, squeeze the linen well so that all the strength of the Coffee may

be secured, and pass the liquor through a filter. Then take double the bulk of sugar (clarified, and boiled till smooth), boil this to crack, and add the infusion ; allow the mixture to simmer, then take it off the fire, and put it when lukewarm into bottles. This Coffee syrup is a convenient beverage for travellers. If two teaspoonfuls are put into a cup, and boiling water is poured on, good Coffee can be thus quickly made. Sugar mixed with Coffee draws forth all its aroma ; and if mixed with *Café au lait* it gives a light, agreeable, easily-made food which admirably suits those persons who must work at the desk immediately after breakfast. The Turks, who are superior to all others in Coffee-making, do not use a mill for grinding the berries : they break the Coffee up in wooden mortars with wooden pestles, and when these have been for a long time in family use they become saturated with fine aromas, being therefore valuable, and commanding high prices. The undoubted opinion of experts is that Coffee made with the pounded berry is better than that made with ground berries. With respect whereto a singular example may be given of the influence which this or that manner of manipulating can make to a food-substance : "Sir!" said Napoleon one day to Senator Laplace, "how is it that a glass of water in which I melt a piece of loaf sugar appears to me to taste better than that in which I put the same quantity of ground sugar?" "Sire," said the savant, "there are three substances of which the elementary constituents are exactly the same—that is to say, sugar, gum, and starch ; they differ only by certain conditions, the nature of which has not been revealed to us ; and I believe that it is possible the force exercised by the pestle causes certain portions of the sugar to pass into the states of gum, or starch, and occasions the difference of flavours to which you refer." This fact is fairly well established, later observations having confirmed the opinion of Laplace.

Brillat Savarin says that "having tried all the customary methods for making infusion of Coffee, he came to the conclusion that the process known as "*à la Dubelloy*" is the best. This consists in pouring boiling water on the ground Coffee, put into a porcelain, or silver vase pierced with very small holes. The first decoction is taken, heated again to boiling, and passed through the Coffee anew, when a beverage as clear, and as good as possible is obtained.

Persons who can take Coffee in the evening, or at night,

without being prevented thereby from sleeping, seem to need it also during the day for keeping them awake, and are pretty sure to doze during the evening if they fail to take Coffee after dinner. A still larger number of persons are sleepy all the day when they have not had their Coffee in the morning. Coffee is a much more energetic beverage than is usually believed. A man with a good constitution can live a long time, and drink two bottles of wine every day; but the same man could not take an equal allowance of Coffee for the same length of time: he would become imbecile, or would die of consumption. It is a duty for all the papas and mammas of the world to severely interdict Coffee to their children, if they do not wish them to be old at twenty years; this advice is specially offered to the Parisians" (Brillat Savarin).

For persons liable to sluggishness of the liver, and of the biliary functions, Dandelion Coffee is prepared, and kept in stock by all the leading grocers. It is made from the dried root of the Dandelion plant (*Taraxacum*) of our fields and hedgerows, being used as a capital substitute for ordinary Coffee. This root is at its best in November. Its active constituents are taraxacin, and taraxacerin, with inulin (a sort of sugar), gluten, gum, potash, and an odorous resin which is commonly supposed to stimulate the liver. Dandelion leaves, when young and tender in springtime, are eaten on the Continent in salads, or, when blanched, with bread and butter. Again, a Dandelion wine is made for the use of persons with an indolent liver, because of the principle *taraxacin*, and the resinoid bodies contained in the herb. Potassium and calcium salts are also present, which were formerly thought to make the Dandelion diuretic, and hence was derived its old English title—coarse, but significant—Piss-a-bed

"When Willie was a little boy
Not more than five or six,
Right constantly did he annoy
His mother with his tricks.
Yet not a pin, or groat cared I
For what he did, or said,
Unless, as happened frequently,
The rascal wet the bed.

'Tis many times that Willie has
Soaked all the bedclothes through,
Whereat I'd rise, and light the gas,
And wonder what to do.
Yet there he lay, so peaceful-like:
God bless his curly head!
I quite forgave the little tyke
For wetting of the bed.

Ah me ! those happy days have flown !
My boy's a father too ;
And little Willies of his own
Do what he used to do :
And I—ah ! all that's left for me
Are dreams of pleasure fled :
My life's not what it used to be
When Willie wet the bed."

Lord Macaulay, when he retired from Parliament (1856), lived at Campden Hill, and took to gardening. He disliked dandelions singularly, and relates how he "exterminated all the dandelions which had sprung up since yesterday." Again, when writing to his niece, "Dear little Alice," he tells her : "I have had no friends near me but my books and my flowers ; and no enemies but those execrable dandelions ! I thought I was rid of the villains ! but the day before yesterday when I got up and looked out of my window, I could see five or six of their great, impudent, yellow, flaring faces turned up at me. 'Only you wait till I come down,' I said. How I pulled them up ! How I enjoyed their destruction ! Is it Christian-like to hate a dandelion so savagely ?" Bergins says he has seen intractable cases of chronic liver congestion cured, after many other remedies had failed, by the patients taking daily for some months a broth made from dandelion roots sliced, and stewed in boiling water, with some leaves of sorrel, and the yolk of an egg. These roots are in their best condition for yielding juice about November. During winter the sap is thick, sweet, and albuminous, but in summer time it is bitter and acrid. Frost causes the bitterness to diminish, and sweetness to take its place ; but after the frost this bitterness recurs, and is intensified. The whitened growth of a dandelion root when it has been blanched, and drawn out in length by having to become developed through a mole-hill, is much more sweet, and tender, and free from bitterness than if ordinarily grown. Parkinson writes (1640) : "Whoso is drawing towards a consumption, or ready to fall into a cachexy, shall find a wonderful help from the use of young, tender dandelion leaves, blanched, and eaten with bread and butter in the spring for some time together."

CONFECTIONERY.

FORMERLY there was made by the cook a rich syrup with the spicy aromatic CARNATION flower contained therein, the same

being used as a tasty sauce for puddings. This is the flower of Jove (*Di-anthus*), and it is redolent of cloves. Its second title, "Sops in Wine," was given because the petals were infused in wine to give this a spicy flavour, especially in the cup presented to brides immediately after the marriage ceremony. The blossoms are highly cordial, whilst the dried petals, if powdered coarsely, and kept in a stoppered bottle, are of service against heartburn, and flatulence, being given in a dose of from twenty to sixty grains. Gerarde says: "A conserve made of the Carnation flowers with sugar is exceeding cordiall, and wonderfully above measure doth comfort the heart, being eaten now and then." By a mistake Turner designated the same flower "Incarnation." These flowers were thrown of old into casks of wine to give a pleasant taste, and a gallant colour.

At the famous MULBERRY Gardens planted in London by James the First (1609)—where Arlington Street now stands—were made the famous restorative Mulberry tarts which Dryden loved. But in Germany mothers disapprove of Mulberries for their children, and declare the devil wants the dark juicy berries for blacking his boots. An excellent Mulberry wine is sometimes brewed which retains all the remedial virtues of this fruit: "On each gallon of ripe Mulberries pour one gallon of boiling water, and let them stand for two days; then squeeze all through a hair sieve, or bag. Wash out the tub, or jar, and return the liquor to it; put in the sugar at the rate of three pounds to each gallon of liquor; stir up until quite dissolved; then put the liquor into a cask; let this cask be raised a little on one side until fermentation ceases, and then bung it down. If the liquor be clear, it may be bottled after four months. Into each bottle put one clove, and a small lump of sugar; and the bottles should be kept at a moderate temperature. The wine can be used in a year from the time of bottling. The juice of Mulberries is curative of putrid sore throat when employed as a gargle, and the ripe fruit is somewhat laxative. The familiar game played by children "Here we go round the Mulberry bush" bore reference originally to the Bramble, or Blackberry bush, with its similar juicy dark-red berries. The Mulberry is *not* a bush.

VIOLET "cakes" (already noticed) are of recent revival, being both nice, and with a reputation against cancer. "Take the juice of one lemon, and put it into a silver porringer, and

add to it some sweet Violets; then let it stand a night, and put to it some more Violets, and so stand until it be as deep coloured as you wish; then take a spoonful of fine-powdered sugar, and wet it with the juice; then hold your spoon over a chafing dish of coles, stirring it; smoak, but not boil; take it off, and drop it into cakes (or medicated bon-bons)." "I want taiblet," said Wee MacGregor to his father. "Taiblet!" exclaimed his mother; "Weans that gets taiblet gets ile after." From the flowers of the Sweet Violet (*Viola odorata*) a conserve known as "Violet sugar," and dating since the time of Charles the Second (when it received the name of "Violet-plate"), has proved of excellent use in consumption of the lungs. This Sweet Violet is well recognized by its fragrant perfume when growing in our woods, pastures, and hedge-banks. The odour of the petals is lost in drying, but a pleasant syrup is to be made from the fresh flowers, which syrup possesses the sweet scent of Violets, and which is gently laxative for children. These homely blossoms are grown in abundance at Stratford-on-Avon (where more appropriately?) for the purpose of making the syrup. Again, the same dark purple flowers give zest and beauty to a salad for the table. In Syria a special sugar is blended with sweet Violet petals for making Sherbet. The Romans brewed an exquisitely-flavoured wine with Violet flowers, these being commended for nervous disorders, and epilepsy. A chemical principle, "violin," is contained in all their parts. When the plant is treated with spirit of wine as a tincture, this acts beneficially to relieve a spasmodic cough, with tight breathing. Napoleon the Great claimed the Sweet Violet as his own particular flower, for which reason he was often styled "*Le père la Violette*," this floral association dating from the time of his exile to Elba. The wild Violet, common on our banks, and in our pastures, is the familiar Pansy, from the French "*Pensée*," "thoughts;" (as Ophelia said, "There is Pansies: that's for thoughts"). The Pansy root has properties almost identical with those of ipecacuanha, and is often used as an efficient substitute for the same by country doctors. The whole herb contains chemically "violin," resin, mucilage, sugar, and the ordinary structural constituents of plants. This chemical principle, "violin," as contained in the wild Pansy, or Violet, resembles "emetin" in action. As long ago as in 1653 to make "a poultess for a swelling" the wild Violet

had a curative reputation. "Take a good handful of Violet leaves, and as much groundsel, of chickweed and mallows half a handful; cut all these with a knife, and so seeth them well in conduit water, and thicken it with barlie meal, being finely sifted, and so roule it sure, and lay it to the swelled place, and shift it twice a day." It has been recently reported that a lady of title is grateful for cure from cancer through the application of Violet leaves; the disease was in her throat, and so advanced that the case seemed hopeless, there being complete inability to swallow food. A cold infusion of the green leaves was kept constantly applied outside her throat on a compress, this being frequently changed afresh. At least a hundred years ago Violet leaves were held to be curative of the same dire disease.

Reverting to the Sweet Violet, its petals are kept candied by confectioners as a pleasant and attractive sweetmeat; also Violet jelly, and Violet fritters are made by the cook. In the fourteenth century Sweet Violets were among the ingredients commended for stuffing a roast hare. These perfumed flowers were formerly worn as amulets, or charms. The Violet was the symbolic flower of Athens; in old Pagan days it was dedicated to Venus, but in modern folk-lore it is devoted to the Virgin Mary. A noted tamer of rattle-snakes died recently in America, having been accustomed to supply the zoological collections, and museums with "rattlers" throughout the world. He had been bitten scores of times, whilst his infallible cure was a poultice of Violet leaves. "I never saw anybody that looked stupider than you do," said a Violet (to Alice, *Through the Looking-glass*), so suddenly that Alice quite jumped, for it hadn't spoken before. "Hold your tongue," cried the Tiger Lily; "as if you *ever* saw *anybody*: you keep your head under the leaves, and snore away there till you no more know what's going on in the world than if you were a bud!" The leading chemists now manufacture a liquid extract of fresh wild Violets from the flowers, and the leaves

COOKERY.

The French ideal of a perfect cook is that he shall exactly understand the nature and properties of the substances which he employs, so that he may correct, or improve, such aliments as nature presents in a raw state. He must have a sound head,

a sure taste, a delicate palate, and must never forget that "*seasoning* is the rock on which indifferent cooks make shipwreck." This is to say, that in the sublime culinary art, sense, tact, and experience are better than the learning which only exhibits, and sometimes defeats itself, in over-elaboration, and costly excess. President Loubet, at the Culinary Show in Paris (1902), said to the assembled *chefs*, and scullions: "France is famous all over the world for her literature, her arts, and her Cookery. Thanks to French Cookery, plebeians like you, and me receive crowned heads at our tables. Continue, then, to be good cooks: attend well to your sauces, and devote to them all your talent, so that they in return may heap honour upon yourselves." "The man," said Brillat Savarin, "who invents a new *plat* is a greater benefactor to the human race than the man who discovers a new planet." But a natural aptitude for the art of cooking must be possessed—"*On peut devenir fruitier; on est né rotisseur.*"

In the time of our Queen Elizabeth the red-nosed cook ruled omnipotent in big kitchens; his sceptre was a rolling-pin, a case of knives swung at his side, and chests of spices were his crown jewels. Local dishes were then strictly retained. Devonshire had its white pot, and clouted cream; Cornwall its herring, and pilchard pies; Hampshire was renowned for its honey; and Gloucestershire for its lampreys. In 1750 the first public Restaurant was founded in France at Paris by a cook named Boulanger, over whose shop and dining rooms was displayed the Latin inscription, "*Venite omnes qui stomacho laboratis, et ego restaurabo vos*"—"Come to me all you who are hungry, and I will restore you to comfort."

Broadly speaking, it may be said that most forms of cooking actually lessen the digestibility of animal foods, and increase that of vegetable foods. Moreover, it is found by doctors that many sick persons can take raw, or much underdone meats more easily than other forms of nutriment. The general effect of cooking on the structure of meat is to lessen the consistence of its fibres by converting into soft gelatin the hitherto firm connective tissue which holds them together, also to remove fat by melting it down; the chief result of cooking on meat is to diminish its amount of water. That meat is rendered less digestible in proportion to the degree of cooking which it receives, is shown by the ascertained fact that three and a half ounces

of beef, when eaten raw, disappear completely from the stomach in two hours, whereas when half-boiled the meat has not disappeared until at the end of two and a half hours, nor when wholly boiled until three hours have expired; when half-roasted it takes three hours to undergo digestion in the stomach, and when wholly roasted four hours. "Raw flesh," says Brillat Savarin, "though it sticks to the teeth, is not at all unpleasant to the taste; seasoned with a little salt it is readily digested, and is certainly as nourishing as in any other form.'

The effect of heat on the albuminous parts (proteids) of foods is to coagulate them, this being effected at about a temperature of 170° Fahr$^{t.}$, or 42° below the boiling point. If the degree of heat employed in cooking goes beyond this, the value of the food is lessened by the hardening, and shrinking of the albuminous materials; the importance of which fact in its practical application to cooking has long been recognized, though commonly neglected, or disregarded in effect. In the cooking of *vegetables* the moist heat of the water, raised to nearly, or quite boiling point, swells up the starch grains, and ruptures their surrounding envelopes, so that the invading water makes a paste with the escaping starch, or a form of starch jelly. If green vegetables are cooked in any excess of water, their bulk is reduced, and their valuable mineral salts become dissolved away; so that in this manner their nutritive value is considerably lessened, though perhaps their digestibility may be enhanced; but their chief worth as food lies in their undiminished bulk, and in their mineral salts. When a cabbage, or carrot, or potato, is boiled, a large proportion of the soluble potash salts pass from the vegetable tissue into the water, which is generally poured away, and with it the precious elixir which is the true preventive of gout, rheumatism, lumbago, and rheumatic neuralgia. The French housewife's method of cooking vegetables is far more sensible, and excellent: by her the quantity of water used is so nicely measured as not to require any abstraction, but it forms a sort of emulsion of the juices with the oil, or fat, which she always adds at the right time, and in proper proportion. Vegetables should never be salted until they are nearly cooked, else they will be hardened by this addition. It is interesting to know that the advantages of slow cooking are well recognized by some savage tribes; and in this respect the civilized cook has something to learn from

them. For instance, the following is the method of cooking practised by the Kanakas, of the Friendly Islands: "A hole is scooped in the earth, and a fire is made therein with wood, and kept burning until a fair-sized heap of glowing charcoal remains. Pebbles are then thrown in until the charcoal is covered. Whatever is to be cooked is enveloped in leaves, then placed upon the pebbles, and more leaves heaped upon it. The earth is next thrown back into the cavity, and stamped well down. A long time is, of course, needed for the viands to become cooked through, but so subtle is the mode that to overdo anything is almost an impossibility. A couple of days may pass from the time of 'putting down' the joint, yet when it is dug up it will be smoking hot, retaining all its juices, tender as jelly, yet withal as full of flavour as it is possible for cooked meat to be. No matter how large the joint is, or how tough the meat, this gentle suasion will render it succulent, and tasty; and no form of civilized cookery can in the least compare with it. No better illustration of the advantages of slow cooking could well be found" (Hutchison, *Cruise of the Cachalot*).

"We must bear in mind," as Sir Wm. Roberts has taught, "that among civilized races the preparation of food for the table is carried to a high degree of practical effect. The cereal grains, for example, which are employed for making bread, are first finely ground, and sifted from the bran by the miller; the flour is subjected, with the aid of moisture, and artificial heat, to a cooking process; the meats and fish we eat are boiled, or roasted; the vegetables we use are carefully deprived of their coarser parts, and are then boiled. All this preliminary preparation and cooking, serve to make the food more capable of being thoroughly exhausted of its nutritive qualities. Even as it is, some waste occurs, and the fæces always retain considerable elements of undigested food. But it is obvious that if food be rendered too easy of digestion, there arises a risk that the nutriment will pass unduly quick, and wastefully, into the blood, and on through the tissues into the excretory organs; so likewise out of the body before this food has been made fully and economically available for the completion of the slow nutritive processes. Moreover, a sudden irruption into the blood of large quantities of newly-digested aliment would tend to disturb the chemical balance of that fluid, and thus interfere with the tranquil performance of its functions. A too rapid digestion and absorption

of food may be compared to feeding a fire with straw, instead of with slower burning coal. Thus is it also with human digestion, our highly-prepared and highly-cooked food requires in those persons who are healthy, and vigorous, that the digestive fires shall be damped down in order to ensure the economical use of food; a slow digestion being quite a different thing from an imperfect digestion. The practice of the Irish peasant to underboil his potato so as to 'leave a stone,' as it is said, 'in the middle of it,' and the practice of the Scotch peasant to underboil his oatmeal, making his brose by simply pouring boiling water on the meal—both these processes are designed to enable the meal to stay the stomach for a sufficiently long period."

Admirers of the Jewish mode of cooking claim for this a great wholesomeness, and adaptability to a weak digestion; and it is certainly worthy of note that Christian children do not compare favourably with the Jewish in healthiness, longevity, and the power to resist disease. Their (Jewish) meat is most minutely inspected to ensure its cleanliness, and healthiness; its slaughterer must be a practised hand, and make use only of the keenest weapons, as any bruising, or lacerating of the wound inflicted, renders the meat unfit for consumption. When forming combinations of their food they never mix milk, or its products, with meat; to do which would be regarded by them as a breach of the precept, "Thou shalt not seethe a kid in its mother's milk;" the principle being that food killed by violence shall not be mixed with that which is rendered up peaceably; such a mixture is an abomination! Some persons who suffer from faulty digestion, having tried the Jewish system, affirm that it suits them much better, because mixed foods are disallowed; so that healthier blood is made, and the whole vital system is purer (A. Blyth, 1884). Also, by the Jews a strict examination of the animal slaughtered for food is made straightway after its death, with the view of discovering whether anything was amiss with its condition of health before it was killed; and many are the laws, and tests laid down by the Rabbis to this end, which is not by any means a mere formality. Thus, of the 21,000 sheep which were slain in the second half year of 1900, no fewer than 6,000 were rejected as not wholly sound, and therefore not "kosher"; and the same strict precautions are taken with respect to other animals. "But what becomes of all these rejected animals?" asked a representative of *Cassell's*

Journal. "Oh," was the reply, "they are bought up by the Gentiles, and eaten by them!"

That man is essentially a cooking animal, is a fact borne out by the knowledge that cooking utensils have been discovered wherever human life has been found to have existed. We all believe that fingers were made before forks; but it is not generally known that forks were in the first place constructed to imitate fingers—originally by the Romans with two prongs, as the finger and thumb, then as three fingers, and later on as the whole hand. The English people are indebted to one Tom Coryat for introducing the fork amongst them, because of which boon he was given the sobriquet "Furcifer:" *Furca*, being really a pitchfork. ("*Expellas naturam furcâ: tamen usque recurret.*") Not until some time after the Restoration were forks in general English use. About Pepys' time each guest at table was expected to bring his own spoon and fork to a meal, and to use it throughout without change. During the sixteenth century, at a man of position's table plates could not be provided for all who sat down to the meal; and the original trencher was a thick slice of bread on which the meat was placed, and which after being so used was given to the poor. And even as lately as at the beginning of the last century (1810) a bowl of coloured glass containing water was placed before each guest, at the end of dinner, and the women as well as the men stooped over it, sucked up some of the water, rinsed out the mouth, and swilled the water back again into the bowl. Such behaviour represented the extreme of table refinement amongst our most cultivated persons less than a hundred years ago. There is Biblical authority for telling how *men*, in ancient days, used to wipe the dishes (2 Kings xxi. 13): "And I will wipe Jerusalem as a *man* wipeth a dish, wiping it and turning it upside down." This would seem to show that of old the kitchen was not exclusively woman's kingdom.

Lately a spirited comparison between English and American Cookery has been made in some of our leading journals. In *Brooklyn Life*, thus recently sang an unfortunate husband over the water:—

"She's joined a class, and learn't to cook,
Oh! woe! oh! deepest woe!
She gets it out of a terrible book,
And her biscuits eat like dough,
Like dough,
And her biscuits eat like dough!」

I have to smile, and swallow her pies:
Oh! would that I were dead!
Her puddings boiled are a sad surprise,
And I can't describe her bread,
Her bread,
And I can't describe her bread!

Poor little woman! She does her best
To make me a happy man:
But I wish she'd love me, and leave the rest
To our good old Mary Ann,
'ry Ann,
To our good old Mary Ann."

In the *St. James' Gazette* (June, 1902) Marie Louise, the Belgian wife of an Englishman, asks: "Will England ever get its daughters to understand that Cooking is an Art (with a capital A), and a most interesting and pleasurable Art if properly taught and practised? Alas! I doubt if things will ever alter in such respect, for English girls are not built that way; no matter of which class—upper, middle, or lower—they are not eager to learn, and therefore it is not only the Americans who are the sufferers here, but England's own children become weaker and weaker every generation through that dire malady, indigestion." Dickens lets us know that in his day things were different: "Mr. Pickwick's landlady in Goswell Street was a comely woman, of bustling manners, and agreeable appearance, with a natural genius for cooking, improved by study, and long practice, into an exquisite talent." Nowadays, as quoth the *Art of Cookery* (1708):—

"The gentry take their cooks, tho' never tryed;
It seems no more to these than 'up, and ride.'"

Henry the Eighth of England rewarded his cook by the gift of a manor for having composed a pudding of special merit. What a contrast do the following lines, pathetically true, present to-day:—

"A woman there was, and she wrote for the press,
(As you, or I might do),
She told how to cut, and fit a dress,
And how to stew many a savoury mess;
But she never had done it herself, I guess!
(Which none of her readers knew!)

Oh! the hours we spent, and the flour we spent,
And the sugar we wasted like sand,
At the 'hest of a woman who never had cooked,
(And now we know she never could cook,
And never did understand!)

The frugal repast which Horace, the Roman Poet, provided for a neighbour whom he had invited, or for a guest whom rough times had constrained to seek a refuge with him, consisted, not of rare fishes procured from the city, but, more sensibly, of a fine pullet, and a plump kid, with dessert to follow, of grapes, figs, and nuts.

" At mihi cum longum post tempus venerat hospes,
Sive operum vacuo longum conviva per imbrem
Vicinus, bene erat, non piscibus urbe petitis,
Sed pullo, atque hœdo ; cum pensilis uva secundas,
Et nux ornabat mensas cum duplice ficu."

It is to be noted that the object aimed at in cooking food is twofold : First, from an æsthetic point of view, to improve its appearance when it comes to table, and to develop in it new flavours ; second, with a hygienic purpose, to partially sterilize the food, thereby enabling it to remain longer sweet, and good. No animal parasite found in meat is capable of withstanding a temperature of 70° Centigrade (158° Fahr$^{t.}$), therefore all ordinary forms of cooking will render meat free from this source of infection. Stewing is in many respects the ideal method for cooking meat ; it coagulates the proteids without over-hardening them, whilst none of the flavouring ingredients are lost, seeing that the juice is eaten with the meat. But it is a mistake to suppose that cooking increases the digestibility of all foods ; this is true only with respect to vegetable foods ; that of animal viands is, as already stated, diminished rather than increased by cooking.

" The fundamental principle of all
Is what ingenious books the *relish* call.
For, when the market sends in loads of food,
'Tis this in nice perfection makes it good."

" Before each meal is served, or after it has been cooked, and eaten, the housewife," so a recent American authority teaches, " should add up the different amounts of proteid, fat, and carbohydrates found in the food ! Computing cards should be put into requisition at each meal ; then when the day is over you can find out whether you have taken too much of one kind of food, or not enough of another." With reference to this new scientific device the *Chicago Tribune* humorously puts the matter thus :—

" Mother's slow at figures, but she always has to count
The proteids, to make sure we receive the right amount ;
She keeps a pad of paper, and a pencil, near the sink,
And estimates our victuals—all the things we eat, and drink ;
She lists our carbohydrates, and she scribbles down the fat,
And our specific gravity—she closely watches that.

Mother's slow at figures, so our breakfast's always late ;
The proteids, and the hydrates make the task for her too great ;
We never get a luncheon, since she figures on till noon,
And finds we've overdone it, and that nearly makes her swoon ;
Mother's always tabulating every pennyweight we eat ;
Except the meals we smuggle from the cook-shop down the street.

CORDIALS AND RESTORATIVES.

In olden times the good Elizabethan housewife was the doctor's great ally. In her still-room the lady with the ruff and fardingale was ever busy with cooling waters, surfeit waters, and cordial waters, or in preparing conserves of roses, spirits of herbs, and juleps for calentures, and fevers. Poppy water was good for weak stomachs ; Mint and Rue waters were efficacious for the head and brain ; even Walnuts yielded a cordial. Then there was Cinnamon water, and the essence of Cloves, Gilliflowers, and Lemon water, Sweet Marjoram water, and Spirit of Ambergris (an excrement of the Spermaceti Whale). Respecting the last mentioned of these restoratives, it should be told that Brillat Savarin has quite recently given to the public a remarkable recipe : "Take six large onions, three carrots, and a handful of parsley ; chop them up, and put into a stewpan ; heat them with a little, good, fresh butter until they change colour ; when this is done, put in six ounces of sugar candy, *twenty grains of ground Ambergris*, with a crust of toast, and three bottles of water ; boil up for three quarters of an hour, adding water anew to make up for the loss by evaporation. While this is on the fire, kill, pluck, and draw an old cock, and pound it up (flesh and bone) in a mortar with an iron pestle. Also chop up two pounds of good lean beef. This done, mix the fowl and beef together, and season with salt and pepper. Put the whole into another stewpan on a quick fire, and add from time to time a little fresh butter, so as to keep it from sticking to the pan. When it is heated through, pour in the broth from the first stewpan little by little, and when all is in give it a strong boil for three-quarters of an hour, always adding enough hot water to keep it to the same volume of liquid. At the end of this time the Restorative is ready, and it exercises a sure effect on the invalid if his stomach has but sufficiently retained its digestive powers. To use the Cordial give a cupful every three hours until it is time for the invalid to go to sleep. On the following day give a good cupful the first thing in the morning, and the

same at night, continuing the said plan until the three bottlefuls are finished. Keep the invalid on a light, but nourishing diet, such as the thighs of poultry, fish, sweet fruits, preserves, etc. It will scarcely ever happen that a second dose of the Restorative will be needed at that time. On about the fourth day the invalid will be able to resume his ordinary occupation. If the Restorative thus prescribed is made use of at a banquet, the ancient rooster may be replaced by four old partridges, and the beef by a piece of leg of mutton (whilst the Ambergris and sugar candy are at option). It is well that everybody should know that though Ambergris, considered as a perfume, is distasteful to persons with too sensitive nerves, it is nevertheless admirably tonic, and exhilarating when taken internally. Our ancestors made great use of it in cookery, and were all the better for it. Richelieu is said to have habitually sucked pastilles flavoured with Ambergris ; and other well-known persons, when feeling the weight of age, or oppressed by lack of bodily energy, by mixing a piece of Ambergris (ground with sugar) the size of a bean, with a large cupful of chocolate, and drinking this, have found beneficial effects. By means of such a tonic the action of life becomes easy, thinking is no difficulty, and insomnia (sleeplessness), which is," says B. Savarin, "with me the infallible consequence of drinking coffee, becomes obviated."

Given in detail, particulars may be found concerning numerous Cordials in our *Kitchen Physic*, such as Alcohol, Beer Soup, Coffee, Egg Cordial, Liebig's Meat Extract, the Mints, Quinces, Ratafia, Rum Punch, Tea Caudle, and Wine Whey. Others may be usefully added, to wit, Allspice, Caraway, Cinnamon, Cloves, Grapes, Honey in Mead, Raisins, Rosemary Wine, Saffron, and the Garden Thyme. The four Cordial flowers of English Simplers were the Rose, the Violet, the Alkanet, and the Borage. "Egg silky," as it is termed at the Cape, is another such excellent Cordial for a cold : "Put three entire eggs, covered with the juice of three fresh lemons, into a basin for three days, turning the eggs now and again so that all the shells shall become dissolved ; then take away from the mixture the inner thin skins, which are unwholesome ; beat up the eggs, whilst removing any specks ; next add a dessertspoonful of sifted sugar, and a wineglassful of old rum ; put the mixture into a bottle, and keep it corked ; then take a wineglassful every morning before breakfast." Again "Punch à la Romaine," as it is called, which

is served at dinner, usually after the remove (of the solids), is found to exercise the effect of considerably assisting digestion at such time; it forms an interlude between the principal acts of the play, being a sort of white ice made with lemon-juice, white of egg, sugar, and rum. The quaint old recipe for brewing West Indian Punch with Jamaica rum has an almost cabalistic ring about it :—

"One of sour, three of sweet,
Four of strong, and four of weak."

But, after all, Brandy is to be pronounced *par excellence* the prince of cordial restoratives. This (*Brant wein*, "burnt wine") is a spirituous liquor obtained by the distillation of wine. It contains an average proportion of alcohol from 48 to 54 per cent. In a peculiarly rich Brandy made from the ferment and stalks left from wine manufacture, a wine oil is found, *Cognac oil*, so called from its flavour. Genuine Cognac is distilled from the red, and white grapes of vineyards about Cognac, a small city in the Charente department. But the fact is manifest, that this Cognac could not possibly supply half the Brandy which is represented as such; even some of the costly brands are not expressed from grapes which grow in picturesque old Cognac. Beet-root plays an important part in Brandy distilling, not excepting "fine old Cognac" at sixty shillings the dozen. Another very frequent variety of Brandy is whisky distilled from corn, and flavoured with genuine Cognac, as well as with œnanthic ether. But Spain, which abounds with cheap wines, furnishes some fearsome brands of vile Brandies, coloured with burnt sugar, and contaminated with fusel oil, ether, etc. There is a pure, wholesome Cognac which is immensely valuable for medicinal purposes, being made from the grapes of La Folle, or St. Pierre, such as are carefully cultivated, and guarded, in the vineyards of Charente. These grapes are juicy, large, and very sweet, as well as rich in flavour. The wine expressed therefrom is stored in oaken casks for four years, at the end of which time it is rich in colour, and very astringent in quality, these being the virtues which confer its value as a medicine. In a good year six or seven bottles of wine should yield one bottle of Brandy. After from twenty to forty years Brandy comes to contain a considerable proportion of volatile ethers, and aldehydes, to which some of the most valuable properties of this Cordial spirit

are to be attributed. British Brandy is distilled in England from malt liquors, and has the flavour, and colour, of French Brandy imparted to it artificially.

For *Orange Brandy*, which is an excellent tonic restorative, "to one gallon of best pale Brandy put one dozen Seville oranges; tear these oranges into very thin segments, and squeeze out the juice; next add two pounds of powdered loaf sugar, and stir until dissolved; let it stand a day or two, then shake up well, and leave it for a few months; afterwards bottle it."

Punch is an alcoholic drink in which lemon-juice is introduced, with a flavouring of the peel, as added to either of the principal distilled spirits, water, and sugar. Without doubt the most characteristic Punch is made with Rum, at least in part. It may be drunk hot or cold. As an immediate restorative, and in winter, hot Punch is best. It should never be stronger than the presence of alcohol to 20 per cent will make it; this is about the average strength of Sherry, or Port wine. The Punch will be more wholesome if containing less spirit (down to 10 per cent of alcohol). If milk be added, this will give to the Punch a body which develops, and accentuates its taste. The beverage always remains a little turbid, except when kept a long time; very little precipitation of curd (casein) takes place. "Hot Punch" (the Bagman's Story, in *Pickwick*) "is a pleasant thing, gentlemen, an extremely pleasant thing under any circumstances, but in the snug old parlour, before the roaring fire, on a cold winter's night, with the wind blowing outside till every timber in the old house creaked again, Tom Smart found it perfectly delightful. He ordered another tumblerful, and then another; I am not quite certain whether he did not order another again after that." Also, "when Mr. Pickwick at the skating party fell through the broken ice, and was extricated with much splashing, and cracking, and struggling, he ran off at the top of his speed, muffled in shawls, until he reached Manor Farm, then paused not an instant until he was snug in bed. A bowl of Punch was carried up promptly after some dinner, and a grand carouse was held in honour of his safety; a second, and a third bowl were ordered in, and when Mr. Pickwick awoke next morning there was not a symptom of rheumatism about him; which proves, as Mr. Bob Sawyer justly observed, there is nothing like hot Punch in such cases; and that if ever hot Punch did fail to act as a preventive,

it was merely because the patient fell into the vulgar error of not taking enough of it." Furthermore, after "the leg-of-mutton swarry" at Bath, when Sam Weller played the host to the departing guests, "Mr. Tuckle, the coachman in red, laid aside his cocked hat, and stick, which he had just taken up, and said he would have one glass for goodfellowship's sake; and, as the gentleman in blue went home the same way, he was prevailed upon to stop, too. When the Punch was about half gone, Sam ordered in some oysters from the greengrocer's shop; and the effect of both was so extremely exhilarating that Mr. Tuckle, dressed out with the cocked hat, and stick, danced the frog hornpipe among the shells on the table, while the gentleman in blue played an accompaniment upon an ingenious musical instrument formed of a hair-comb and a curl paper."

Rum is a spirit usually produced by the distillation of fermented molasses, as obtained in the manufacture of raw sugar, but the best varieties are procured by direct fermentation of sugar-cane juice. "Rum," said Oliver Wendell Holmes, "I take to be the name which unwashed moralists apply alike to the product distilled from molasses, and the noblest juices of the vineyard. Burgundy in all its sunset glow is *Rum!* Champagne, the foaming wine of Eastern France, is *Rum!*" As a spirit it owes its dark colour to burnt sugar. A considerable quantity of the Rum sold in this country is made from "silent spirit," being flavoured chemically with "ethyl-butyrate." The most esteemed Rum comes from the West Indies, as Jamaica Rum, Antigua, Grenada, or Santa Crux Rum. Our forefathers a generation ago were fond of Rum Shrub (from *Shariba*, drink), which was concocted by boiling fresh currant juice for about ten minutes with an equal weight of sugar, and adding a little Rum. Thackeray wrote (*Phillip's Adventures*): "There never was any liquor so good as Rum Shrub, never! and the sausages had a flavour of Elysium." "Oh! my young friend," said the red-nosed Mr. Stiggins, the shepherd, to Sam Weller (in *Pickwick*), "all taps is vanities: if there is any one of them less odious than another it is the liquor called Rum,—warm, my dear young friend, with three lumps of sugar to the tumbler." Rum is remarkable for its freedom from fusel oil, or amylic alcohol.

Again, a Sherry Cobbler (originally Cobbler's Punch) as a summer drink, to be sucked through a straw, is reviving, and wholesome in hot weather. It is made by mixing up together

in a large glass pounded ice, wine, and sugar, with slices of orange, or pineapple.

Ratafia, deriving its name from the Malay "Tafia," a liqueur prepared from cane sugar syrup, is a sweet cordial flavoured with fruits, generally those yielding the essences of black currants, bitter almonds, or peach and cherry kernels. Ashton in his *Social Life in the Reign of Queen Anne*, telling of a Lady at the Play, says: "It would make a man smile to behold her Figure in a front Box, where her twinkling eyes, by her afternoon Drams of Ratifee, and cold tea, sparkle more than her pendants."

Allspice (Pimento) is likewise popular as a warming cordial, having a sweet odour, and a grateful aromatic taste. The name is given because the berries afford in smell and taste a combination of cloves, juniper berries, cinnamon, and pepper. The special qualities of Pimento reside in the rind of its berries, and the tree is the *Eugenia Pimento* of Brazil. Pimento berries are put into curry powder, and are added to mulled wines; they are useful against flatulent indigestion, and as a carminative stimulant.

Sack posset, an old American cordial (especially favoured at weddings), was made according to a familiar rhyme :—

"From famed Barbadoes, on the Western Main
Fetch sugar, half a pound: fetch sack from Spain,
A pint: and from the East Indian Coast
Nutmeg, the glory of our northern coast.
O'er flaming coals together let them heat,
Till the all-conquering sack dissolves the sweet.
O'er such another fire set eggs, twice ten,
New born from crowing cock and speckled hen;
Stir them with steady hand, and conscience pricking
To see the untimely fate of twenty chicken.
From shining shelf take down your brazen skillet;
A quart of milk from gentle cow will fill it.
When boiled, and cooked, put milk and sack to egg,
Unite them firmly like the triple league;
Then, covered close, together let them dwell
Till Miss twice sings 'You must not kiss and tell.'
Each lad and lass snatch up their murdering spoon
And fall on fiercely like a starved dragoon."

Concerning Blackberry Cordial as an excellent restorative, mention has been already made here in high commendation thereof.

Sweet Grapes, again, besides being of capital service for supplying warmth as combustion material by their ready-made sugar, are cordial by the essential flavours of the fruit, whilst

a surplus of the glucose (Grape sugar) serves to form fat for storage.

The Peppermint (*Mentha piperita*), or Brandy Mint, which grows not uncommonly in moist places about England, and is cultivated largely at Mitcham, yields by its fragrant, powerfully aromatic, and comforting essential oil, preparations which diffuse warmth in the stomach, and mouth, acting as a carminative stimulant, with some amount of sedative power against the pain of colic, flatulence, spasm, or indigestion. This is through the potential oil, of which the herb yields 1 per cent. The leaves and stems exhale a strong, refreshing, characteristic aroma, which, whilst delicate at first, is quickly followed by a sense of numbness, and coldness, increased by drawing in the breath. Lozenges made of Peppermint Oil, or Essence, are admirable for affording ease in colic, flatulence, and nausea. They will also help to prevent sea-sickness, besides proving antiseptic if food has been taken of a putrescent tendency, or hard to digest. When Tom Hood lay a-dying, he turned his eyes feebly towards the window on hearing it rattle in the night; whereupon his wife, who was watching him, said softly, "It's only the wind, dear!" to which he replied with a ready sense of humour, indomitable to the last, "Then put a Peppermint lozenge on the sill." The allied Spear Mint (*Mentha viridis*), such as the cook employs for making Mint sauce, possesses likewise cordial properties by its aromatic essential oil, which is fragrant, and grateful to the stomach; it stimulates the digestive system, and prevents septic changes within the intestines. This is called also Mackerel Mint, and in Germany Lady's Mint (or Money). "The smell of Mint," quoth John Swan, in *Speculum Mundi* (1643), "stirreth up the mind, and must therefore be good for students."

"Marmalade of Quinces," says Austin, on Fruits (1665), "is known to be a good cordial, strengthening the stomach, and heart, both of the sick, and sound." This fruit, *Cydonia*, from Cydon (now Candia), had a former English title, "Melicotone." In ancient Rome it was regarded as sacred; now we banish the tree, because of its strong penetrating odour, to a corner of the garden. Lord Bacon commended "quiddemy," a preserve of Quinces, for strengthening the stomach; and old Fuller said of this fruit, "Being not more pleasant to the palate than restorative to the health, they are accounted a great cordiall."

Matthiolus (1751) commended Quinces boiled with honey, both for meat, and for medicine: "*Ex melle tantum et cotaneorum carne confecta, tam ad cibi, quam ad medicamenti commoda.*"

Rosemary Wine, as kept of old always in the still-room, and well worthy of being yet retained among the housewife's stores for the kitchen, acts, when taken in small quantities, as a quieting cordial to a weak heart, subject to palpitations. Furthermore, it stimulates the kidneys, thus preventing dropsy. This wine may be made by chopping up sprigs of Rosemary from the herb garden, and pouring on them some sound white wine, which is to be strained off after two or three days, and then used. Also, by stimulating the brain and nervous system it proves of service against the headaches of a feeble circulation, and of languid health. Rosemary from the kitchen garden has a pleasant scent, and a bitter, pungent taste, whilst much of its active volatile principle resides in the calices of the flowers; therefore in storing, or making use of the plant, these parts must be retained. It yields its virtues partly to water, and entirely to rectified spirits of wine.

Sultana Raisins, when stewed, will recruit and revive the tired body, and the jaded mind, besides being gently laxative. "Wash and pick one pound of Sultanas; soak them all night in cold water; next morning drain off the water, and put the Raisins into a pan, or basin, and barely cover them with water; add a little grated lemon-peel; put a plate over the top, and stew them in the oven until quite tender, and soft. Some of these Sultanas (hot, or cold), with a slice of whole-meal bread, or brown bread, make a very sustaining meal." Raisin tea, which is both refreshing, and as well supplied as milk with food proteids, may be made as follows: "Put half a pound of good Raisins (stoned) into a quart of cold water, laying open the pulp of the fruit; boil slowly for three or four hours, down to a pint; strain out the skins, etc., through a fine scalded sieve, and add fresh lemon-juice if too sweet. The tea may be taken cold as well as hot."

Yellow Saffron (from the stigmata of the *Crocus vernalis*) is much used by the cottagers of Cornwall and Devon in making their bread, and cakes; also by the professed cook for its rich colour, and its cordial properties. When concocted with sugar into a syrup, it pleases the eye by its splendid hue, and gently exhilarates the system at large, one or two teaspoonfuls being

given for a dose, with a wineglassful of water (hot, or cold). This syrup will serve to energize the organs within the abdomen of both males and females; likewise to recruit a feeble heart, and an exhausted brain. Ray tells that "Saffron has long enjoyed the reputation of comforting the heart, and raising the spirits, going thus far towards the relief of those who are melancholy through grave mental burdens." In our rural districts there is a popular custom of giving Saffron tea for measles, on the doctrine, probably, of colour analogy; to which notion may likewise be referred the practice of adding Saffron to the drinking water of canary birds when they are moulting. Lord Bacon said: "The English are rendered sprightly by a liberal use of Saffron in sweetmeats, and broth." And Thackeray noted when in Paris:—

"Green herbs, red pepper, mussels, *saffron*,
Soles, onions, garlic, roach and dace;
All these you eat at Ferré's tavern,
In that one dish of bouillabaisse."

Likewise Chamomile tea is an excellent revivifying drink for aged persons, an hour or more before dinner. Francatelli directs to "put about thirty dried Chamomile flowers into a jug, and to pour over them a pint of boiling water, covering up the infusion; when it has stood for a quarter of an hour, pour it off from the flowers into another jug, and sweeten with sugar, or honey." The true Chamomile is an aromatic garden herb of prostrate growth, and with a single flower on each stem, whilst signifying by its name Earth-apple. Its flowers grow with a convex yellow disc, exhaling a powerful odour, and having a clean, bitter taste, with the possession of an essential oil in only a small quantity. This medicament can scarcely be considered a food, but nevertheless it is a valuable kitchen adjunct; a teacupful of the infusion, sweetened with a dessertspoonful of moist sugar, and with a little grated ginger added, serves admirably as an appetizing tonic before a principal meal.

"Borage" (which, with its gallant blue flower, is freely grown in the kitchen garden for Claret cup, and the bees) "doth exhilarate," says an old herbalist, "when taken in sallets, and maketh the mind glad almost as beneficially as a bracing sojourn by the seaside during an autumn holiday." "*Borago ego gaudia semper ago*," or "Borage give always courage," tells a truthful Latin adage, so cordial is this popular herb even from

classic times! According to Dioscorides and Pliny, the Borage was that famous nepenthe of Homer, which Polydamas sent to Helen for a token, "of such rare virtue that when drunk steep'd in wine, if wife, and children, father and mother, brother and sister, and all thy dearest friends should die before thy face, thou couldst not grieve, or shed a tear for them." The Romans named Borage "*Euphrosynon*," because when put into a cup of wine it made drinkers thereof merry and glad. "*Vinum potatum in quo sit macerata buglossa mœrorem cerebri dicunt auferre periti*":—

> "To enliven the sad with the joy of a joke
> Give them wine with some borage put in it to soak."

The fresh herb has a cucumber-like fragrance, and when compounded with lemon, and sugar, in wine, with water, it makes a delicious "cool tankard," which is refreshing, and restorative, as a summer drink. Chemically the plant contains potassium, and calcium, combined with mineral acids. The fresh juice affords 30 per cent, and the dried herb 3 per cent, of nitrate of potash. The stems and leaves supply much saline mucilage, which, when boiled, and cooled, likewise deposits nitre, and common salt. It is to these saline qualities the wholesome, invigorating effects, and the specially recruiting properties of the Borage are supposed to be mainly due. Botanically the term Borage is a corruption of *Cor-ago*, because this herb gives strength to the heart; "*Quia cordis affectibus medetur*." The plant was the Bugloss of the older herbalists, and was so named from the shape, and bristly surface of its leaves, which resemble "*Bous-glossa*," the tongue of an ox. "Sprigs of Borage," wrote John Evelyn, "are of known virtue to revive the hypochondriac, and cheer the hard student." Parkinson adds: "Borage helpeth nurses to have more store of milk, for which purpose its leaves are most conducing." The saline constituents promote activity of the kidneys, and for the same reason Borage is used in France to carry off feverish catarrhs. "It is a herb," saith Gerarde, "of force and virtue to drive away sorrow, and the pensiveness of the mind, and to comfort the heart." (After which method Sir Thomas Browne reasons in his *Religio Medici*, when claiming to "cure vices by physick when they remain incurable by Divinity, the same obeying his pills when the precepts of the preachers are contemned.") John Swan, in his

Speculum Mundi (1643), "advised his gentle readers to be discreet in their generation, and to gather to themselves great armsful of *never-dying Borage* (so called because of its fair blew flowers, ripe seeds, and buds, which may all be seen on it at once), and bravely plunge it into wine, where," saith Master Swan, "it cannot but be good, and comfortable, and pleasant for the brain, and heart; it increaseth wit, and memoire, engendereth good blood, maketh a man merrie, and joyfull, and putteth away all melancholie, and madness."

Our garden herb, Thyme (the Thyme of Candy, Musk Thyme), which is used by the cook as a flavouring, or for seasoning purposes, is an excellent cordial. Its proper name, *Thymus serpyllum*, denotes a procumbent creeping plant, whilst "*thumos*" signifies the courage which it inspires. It is anti-spasmodic, good against nervous, or hysterical headaches, for flatulence, and the headache which follows inebriation. Thyme tea is aromatic, fragrant, and refreshing. The plant depends for its virtues on an essential oil consisting of two hydrocarbons, with thymol as the fatty base, this thymol being a famous antiseptic. The Romans gave Thyme as a sovereign remedy to melancholy persons. A little of the herb added to wine imparts thereto a most grateful savour; mixed with food it helps dimness of sight. The herb, wherever it grows wild, denotes a pure atmosphere, and is thought to enliven the spirits by the fragrance which it diffuses into the air around. "I know a bank whereon the Wild Thyme blows," says Oberon, King of the Fairies, in *A Midsummer Night's Dream*. Another variety of the same is Lemon Thyme (*Thymus citriodorus*), distinguished by its parti-coloured leaves, and its lilac flowers. Small beds of this Thyme are cultivated at Penzance, in which to rear millepedes, or hog-lice, for administration against scrofulous disease in several of its forms. The said millepede was the primitive medicinal pill. It is found commonly in dry gardens, under stones, or rubbish, and rolls itself up in a ball when touched, having a brown, horny armour, in plates, around its diminutive body, which body abounds with a nitrous salt, this having long given the creatures a reputation for curing inveterate struma, as well as some kinds of bladder-stone. From three to twelve were ordered of old daily throughout a hundred days, in Rhenish wine, for overcoming cancerous disease. Other popular designations which it bears are Old Sow, Grammar Sow, Saint Anthony's

Hog, Chiselbob, and Cudworm; the Latin name is *Porcellus scaber*.

After all considering of Cordials, "there can be no doubt," as Dr. Hutchison puts it, "that in any case presenting signs of profound prostration of nerves and heart, some alcoholic spirit which is old, and well matured, should be given as the restorative cordial; and it is only when in such condition that spirits become really rich in ethereal bodies. Of Whisky, Rum, and genuine Brandy, the last is by far the best; the finest liqueur Brandy should then be alone employed, no matter how much one has to pay for it. There can be no doubt that its free and timely administration has saved many a life."

In the middle ages of England, and until a hundred years ago, the aforesaid wholesome custom obtained among great ladies, and prudent housewives, of personally distilling cordial waters, essences, and other salutary preparations, to be kept in store for domestic requirements. Thus we read in *Armorel* (Besant), concerning herself, and Roland Lee: "And then she took him into a room of the eighteenth century, which no longer exists there, or elsewhere save in name. It was the *Still-room*, and on its shelves stood the elixirs, and cordials of ancient time: the Currant-gin to fortify the stomach on a raw morning before crossing the Roads; the Cherry Brandy for a cold and stormy night; the Elderberry wine, good, mulled, and spiced at Christmas-time; the Blackberry wine; the home-made Distilled waters, Lavender water, Hungary water, Cyprus water, and the Divine Cordial itself, which takes three seasons to complete, and requires all the flowers of Spring, Summer, and Autumn."

Sir Edwin Arnold recently discoursed at length concerning a marvellous cordial root which the Chinese get from the Korea, *Ginseng*, this being thought to transcend all other cordials, tonics, and restoratives. "It will renovate, and reinvigorate failing bodily powers beyond all other stimulants, stomachics, and energizers of vitality. The Korean people believe the said root to be an absolute panacea for all mortal ills, mental, or physical; it is packed and transmitted with the most scrupulous care and pains, in small parcels of white silk, the mouth and nose of the recipient having to be covered when unfolding these sacred envelopes of embroidered silk, or of crimson, and goldfish skin. The habitat of this wonderful root (in form like a man) is in the glens and slopes of the Kang-ge Mountains, and it can

be found only by persons of blameless life, and purity of heart; when taken from the earth it is thought to utter a low musical cry. It is to be cooked in a special silver kettle, having a double interior, as an infusion, or with rice wine. The plant belongs to the order of *Araliaceæ*. From sixty to ninety grains of the dried root are a proper dose; it fills the heart with hilarity, whilst its occasional use adds a decade of years to the ordinary span of human life."

CORN, INDIAN.

(*See* MAIZE, HOMINY, SAMP, OSWEGO, POP CORN, *and* CEREALINE.)

MAIZE, or Indian Corn, which is produced over immense regions of the globe, though not grown in England, affords nutriment of a substantial kind more largely than wheat, our "Staff of Life." It also contains starch, sugar, fat, salts, and water. Maize has the additional advantage of being easily digested in the human body, so that altogether it makes a specially valuable food. "With a diet of Indian Corn, bread, and pork," says an American writer, "the workmen of this country are capable of enduring the greatest fatigue, and of performing the heaviest amount of physical labour." But Maize is deficient in mineral salts, though richer in fat than any other cereal, except the oat. In Ireland, Maize is cooked as a porridge, or "stir-about," or, as the Americans call it, *mush*.

Hominy, Samp, and Cerealine are starchy preparations of split maize, being of much nutritive value as such, and admirable for making puddings. Corn bread contains more nourishment than wheaten bread, and is a better diet for persons suffering from disease of the liver, or of the kidneys. Doctors will do well to advocate a more extensive use of Corn bread; it is cheaper than wheaten bread, is readily prepared, and requires but little knowledge to make it. The starch of Maize (sold as corn-flour) is a manufactured article, and represents only the fat-forming, heat-producing constituents of the grain; but because containing little, or no mineral matter it cannot sustain the solids of the body. Infants fed on this corn-flour grow up rickety; it contains only about eighteen grains of proteid substance to the pound. The flour of Maize does not make good bread in the ordinary way: it has a harsh flavour, and the meal is heavy. A couple of teaspoonfuls of corn-flour mixed with two tablespoonfuls of

water, and then added to half a pint of boiling milk, and boiled for eight minutes, being sweetened to taste, form a liquid of about the consistency of cream. An old doctor of some note has been in the habit of taking a basin of this every night at bedtime, with decided benefit. For some feeble persons a spoonful of brandy, or a wineglassful of good sound sherry, would be properly added, and would better conduce to its digestion.

COW (*See* BUTTER, CREAM, *and* MILK.)

IN Flintshire, and some other counties, the sweet breath, and smell of the Cow are thought to be of benefit against consumption of the human lungs. Henderson tells of a blacksmith's apprentice who was restored to health when far advanced in a decline, by taking the milk of Cows pastured in a kirkyard. "*Dat Deus immiti cornua curta bovi,*" says the Latin proverb—"Savage cattle have only short horns." So was it in *The House that Jack built,* where the fretful creature that "tossed the dog" had but one "horn," which grew "crumpled." Dr. Jacond, in his *Traitement de la Phthisie Pulmonaire,* makes a great point of consumptive patients who live in the country drinking plenty of new milk, and this in the Cows' stables; not only that they may thus get the milk perfectly fresh, but also that they may breathe the atmosphere of the byre for a while two or three times a day. He feels confident that this atmosphere serves to allay bronchial irritation, and cough. In the *Life of Charlotte Mary Yonge,* by Miss Coleridge, 1903, it is related that Edmond Yonge, a sailor, one of her ancestors, was pronounced early in life to be in a decline, and was therefore sent to be under the care of a Swiss doctor who "made the young man live in a cow-house, and drink milk." Edmond Yonge took several subsequent voyages, and "kept his cough till he was nearly seventy years old."

Under the title of *Le Pied de Bœuf Poulette,* Vieullemont gives a noteworthy recipe of a very nutritious and easily-digested delicacy for the invalid: "Wrap a Cow-heel in washed selvage, and boil it in some water, with vegetables, and spices. Then, having removed the wrapping, cover the heel with a sauce made (white) of cream, with yolk of egg, lemon-juice, and nutmeg, and add parsley, also butter." "*Ce plat par son confortable gout, est très recherché,*" says this experienced cook.

"Hey, diddle, diddle,
The cat scraped the fiddle,
The cow jump'd over the moon;
The little dog bayed
To see such sport played;
And the dish ran away with the spoon."

"Hè! gripon, gripon!
Chat grattait le cremône!
La vache sur la lune cabriole;
L'épagneul grimace
En voyant sa gràce;
Et la chaton le cuiller vole."

Cow-heel broth is both strengthening and remedial to a weakly stomach. In the time of Izaak Walton there was made direct from the cow a pleasant cordial which is now seldom or ever seen, the *syllabub*, or spiced wine, on which milk was pumped from a cow yielding it good and rich into a large bowl; it was then set aside for half-an-hour or more, and afterwards served in glasses with a ladle. Clotted cream was, and still is, put on the top of the syllabub in Devonshire.

"Joan takes her neat rub'd pail, and now
She trips to milk the sand-red cow,
Where for some sturdy football swain
Joan strokes a syllabub, or twain."

Compleat Angler.

COWSLIP.

Because affording an excellent sweet wine with decided curative virtues, the Cowslip merits a passing culinary notice. Pliny wrote about this homely flower, "*In aquâ potum omnibus morbis mederi tradunt*," thus making it seem a veritable panacea. Former medical writers called it the "Palsywort," because of its supposed efficacy in relieving paralysis. Pope has praised the plant for its soporific powers:—

"For want of rest
Lettuce and cowslip wine: probatum est."

Cowslip salad made from the golden petals, with white sugar, and other adjuncts, is an excellent, and refreshing dish. Also a syrup of rich yellow colour may be made from the petals. One pound of the freshly-gathered blossoms should be infused in a pint and a half of boiling water, and then simmered down with loaf sugar to a proper consistence. This syrup, taken with

a little water, is admirable for giddiness from nervous debility, or from previous nervous excitement. It is of old date as given formerly against palsy. Dr. Quincy ordered the same in his *English Dispensatory*, 1728. There is among the curios at Lilford Hall, Northants, a primitive apothecary's jar—of about that time—made of Dutch Delft, in grey glaze, with handle and spout. It bears in front a conspicuous blue painted legend, "*Syr. Paralyseo*" (Syrup for the Paralysed.) A quaintly drawn blue angel supports the label at each end. Cowslip petals were conserved in sugar, and dried in the sun by our grandmothers to mix with tea. The flowers were then known as Paigles, Kingcups, Crewels, and Petty Mulleins; but dearest of all is the old Saxon name "Cusloppe," still almost unaltered. They emit an odour of Anise, which is due to their containing some volatile oil identical with Mannite; their more acrid principle is saponin. For making Cowslip wine, "take one gallon of water, and three pounds of loaf sugar, and boil together for half an hour; in the meantime have ready the rind and juice of two lemons, also the rind and juice of one Seville orange; pour it boiling over these, having first strained the juice; when lukewarm add one gallon of Cowslip pips picked from the stocks and seeds; then add two tablespoonfuls of brewers' good yeast, and let it ferment for three or four days; afterwards to every gallon of wine add half a pint of French Brandy; put all into a cask, and let it remain for two months; then bottle off for use." As a quieting solace at bedtime when a person is nervously tired, a good wineglassful of this Cowslip wine, mixed with one, or two, wineglassfuls of quite hot water, and with some nutmeg grated in, makes an excellent sedative; taking also, if desired, a genuine Abernethy biscuit. In Northamptonshire the Paigle is known as Bedlam Cowslip. Herbals of the Elizabethan date tell that an ointment made from Cowslip flowers "taketh away the spots and wrinkles of the skin, and doth add beauty exceedingly, as divers ladies and gentlewomen, and she citizens, whether wives, or widows, know well enough." Lord Chesterfield, writing to his son, then at Venice (October, 1749), told him that "*mens sana in corpore sano*" is the first and greatest blessing; and I would add "*et pulchro*" to complete it: "May you have that and every other."

CRAB (*See* LOBSTER.)

CRAB APPLE. (*See* VERJUICE.)

FROM green fruits, particularly the wild Crab, and unripe grapes, can be expressed an acid liquor, verjuice, or verjuyce, which is highly astringent, being used as such for both culinary, and medicinal purposes. "Many," says old Burton in his *Anatomy of Melancholy*, "leave roses, and gather thistles; loathe honey, and have verjuice." In Izaak Walton's *Angler* (1653) the milkwoman promises Piscator "when he next comes a fishing two months hence, a syllabub of new verjuice in a new-made haycock." "This book" (*National Observer*, 1893), "is as full of delights as a meadow of cowslips. Good, kind old soul was Walton, but could you have trusted him with a baby, for instance, if some one had told him that a bit of baby was a capital bait for barbel?"

Dr. Nowel, Dean of St. Paul's Cathedral for thirty years, tells that Izaak ("laughter") Walton reached the great age of ninety-five, angling and temperance being the chief causes of his length of life.

"The first men that our Saviour dear
Did choose to wait upon Him here
Blest fishers were; and fish the last
Food was that He on earth did taste;
So let us strive to follow those
Whom He to follow Him hath chose!"

THE ANGLER'S SONG—*Piscator.*

To make Crab-apple jelly: "Prepare the apples by removing the stalks, and the unsound parts, and wipe dry; cut into halves, and put them in a preserving pan, with sufficient water to cover the bottom. When the fruit is quite soft, pour off the water, and to every pint allow a pound of preserving sugar; put this into a preserving pan with some slices of lemon-peel, and let boil slowly for half-an-hour or so, removing the scum as it rises. Have ready dissolved in a little water one ounce of gelatine to every quart of liquor, and just before removing it from the fire stir the gelatine in rapidly. Fill mould, or glasses, with the jelly, and place them in a cold position to set." Again: "Procure some finely-coloured Siberian Crab-apples; allow half a pint of cold water to each pound of fruit; put them on to cook until they become pulpy; then strain through a jelly-bag; and when all the juice is extracted, measure it, and allow one pound of the best loaf sugar

to each pint of the juice; also the rind and juice of one lemon to four quarts of juice; stir until the sugar is dissolved; and when beginning to boil, time it, as it will take from twenty to twenty-five minutes; pour into jars, and store when cold."

Among old-fashioned flowering plants, the Rose Geranium has always occupied a prominent place in popular favour. Our grandmothers, and perhaps some of *their* grandmothers before them, have been known to strew the fragrant leaves of this aromatic plant among their household linen, and their persona *lingerie*; but few persons know the culinary value of the same homely plant. The next time you are making Crab-apple jelly try the following recipe with a few glasses: "Have the Geranium leaves washed so as to free them from any possible insects, or parasites, and dry them gently; then just before pouring the hot jelly into the glasses, throw a small young Geranium leaf, slightly crushed, into the bottom of each glass; it may be allowed to remain until the jelly is used, and will not spoil this in any way. The result is a specially scented, and cordial flavour, which improves the jelly (whether of Crab-apple, or of Cranberry) amazingly." "Sometimes also when baking a cake it will serve a similar grateful purpose to line an earthen plate with fresh Geranium leaves, and turn the hot cake out upon them, leaving it there until quite cold. The steam absorbs volatile fragrance from the leaves, giving the cake a most dainty flavour which suggests nothing so nearly as the odour of a 'La France' rose." Moreover, as an anti-cancerous remedy the Geranium has recently acquired some considerable reputation, and an Essence is made from the whole plant for curative purposes of such a nature.

Verjuice abounds with tannin, and is a capital external application for old sprains, as well as for drying up warts, and causing them to wither away.

CRANBERRY. (*See* WHORTLEBERRY, *and* BILBERRY FRUITS.)

THE Cranberry order of plants, found growing abundantly in England about heaths, and mountainous districts, affords several berried shrubs, the fruits of which possess some medicinal virtues. Among these the Cranberry, or Fenberry, is to be discovered in peat bogs, bearing solitary, terminal, bright red flowers, on straggling, wiry stems, of which the segments are

bent back in a singular manner. Before the blossom expands the fruit stalk resembles the head and neck of a crane; the subacid fruit makes excellent tarts, and is signally antiscorbutic. This is the *Oxycoccos palustris*. Cranberries are also imported in barrels from Norway, and Russia; likewise a larger kind from America, *Oxycoccos macrocarpus*.

The Berberry, or Barberry, has already been told about; it is intensely, but agreeably, acid.

The Whortleberry, popularly called as to its fruit "whorts" (which ripen about the time of St. James' Feast, July 25th), is in its etymology corrupted from Myrtleberry by the initial M. having suffered a change into W. In the middle ages the Myrtleberry was used in medicine, and cookery.

The Bilberry (*Vaccinium myrtillus*)—(*and see* "FRUITS")—is an admirable astringent, and is treated of here explicitly among Fruits. Its fresh juice is antidotal to the bacillus of typhoid fever, as well as to some other kindred bacilli, generally killing these within twelve hours after reaching them within the intestines. Neither the acid gastric juice of the stomach, nor the alkaline contents of the bowels, will interfere with such germicidal action, which extends down to the lowest part of the alimentary canal. Likewise this fruit confers sure benefit against dysentery by its destructive power on bacilli. In Germany the berries are a favourite popular remedy for diarrhœa, being used either dry, or in fruit wine, syrup, or vegetable extract. Bilberry jam is excellent against diarrhœa, with putridity, and flatulence, from bacterial fermentation. This fruit, when stewed, is eaten cold by the Germans at the commencement of dinner in the place of soup.

"Our last Thanksgivin' dinner we
Ate at Granny's house, and she
Had—just as she allus does—
The bestest pies as ever wus.
Canned blackbury pie, an' luscious goose-
Burry, squashin' full of juice;
An' rosburry, an' likewise plum,
Yes, an' cherry pie; yum! yum!
Peach, an' pumpkin too, you bet;
Lawky, I can taste 'em yet.
Yes, an' custard pie, an' mince!
I aint ate no sich nice pies since!"

These various berries have induced some wag to string their terminal appellations together in an odd fashion: "*Equidem*

non pendo unius fragarii ribes, taxi baccæ simile : permittam tamen omnibus chiococcum te rubum. Te rubum idæum prorsus exstitisse : vaccinium autem, senior dic" : "I don't care a straw-berry for a goose-berry like yew-berry, but I'll let folk-s(k)now-berry that you're a regular-ass-berry, and whort'll-berry-senior say ?" Recently "Dagonet," making a pilgrimage to Haworth, rendered famous by the Brontë family, came to a pastrycook's shop, over which was inscribed the inviting legend, "Funeral teas provided." He entered the shop, and found presiding therein a delightful Yorkshire housewife who was busy making parkins. He asked her for a Funeral Tea, whereat she smiled, and gave him some Bilberry tarts (which were a dream), and gossiped to him pleasantly of the Brontes, and showed him Branwell's chair, and told him all about "Funeral teas."

CREAM.

THE fat of new milk, which rises to the surface after standing, is Cream. It contains proteid, and sugar (lactose), in fully as high proportion as milk itself. A good sample of Cream should afford 41 per cent of fat. Clotted Cream, or Devonshire Cream, is specially prepared by scalding the milk in deep pans, thus causing a rapid and very complete separation of the fat ; this Cream possesses only about half as much sugar as ordinary Cream, therefore it is peculiarly suitable for diabetic patients. "Good Cream," says Dr. Hutchison, "contains as much fat as most cod-liver oil emulsions in a similar quantity (though, of course, by comparison it lacks the fish constituents, iodine, bromine, etc.)." Nowadays the old-fashioned way of allowing the Cream to rise to the top of new milk is in large dairies almost entirely superseded by a method for separating the milk by means of centrifugal machines. If Clotted Cream is taken too abundantly it proves aperient. By mixing it with an equal quantity of hot water (and perhaps adding to each teacupful a teaspoonful of brandy) it can be made more digestible for a consumptive, or weakly invalid. "Cream," said Florence Nightingale (in *Notes on Nursing*), "is quite irreplaceable in many chronic diseases by any other article of food whatever. It seems to act in the same manner as beef-tea, and is much more digestible with most persons than milk ; in fact, it seldom disagrees." In the *Art of Cookery* (1708) we read nevertheless :—

"Or you can make whipt Cream ; but what relief
Will that be to a sailor who wants Beef ?" 15

About Devon, and Cornwall, Clotted Cream is eaten with every practical form of sweet thing, from stewed fruit to Christmas pudding, treacle and Cream being an approved combination. This is colloquially known as "thunder and lightning;" and orthodox lovers, out for the day, order it with their tea, in Fuschia-covered cottages; then the correct and mystic practice is to smother a "split cake" (a sort of small Sally Lunn) with some of the thick Cream, and to trace on its surface, in casual letters formed by the golden syrup trickling from a spoon, the beloved one's name, or its initial letters.

CRESSES.

Comprised among Cresses for the table, either in salads, or as vegetable condiments, yet withal salutary to the health as containing sulphur, and mineral salts, are the Water Cress, the Garden Cress, the Winter Cress, and for special occasions some other Cresses. Simon Paulli has said: "An evident proof that these herbs, so useful against scurvy, are enriched with volatile salts, more especially in the spring time, is this: that if we prepare an essence, or a tincture thereof, at the end of April, or at the beginning of May, 'twill look red like Chio, or Malvatic wine,—which it will not do at other seasons of the year." All the Cresses have a pungent, stimulating taste, because of their sulphuretted essential oil. Formerly the Greeks attached much value to the whole order of Cresses, which they esteemed as beneficial for the brain. A favourite maxim with them was, "Eat Cresses, and get wit."

The Water Cress (*Nasturtium officinale*) is of superlative remedial worth, and is therefore highly popular at table. This Cress contains a sulpho-nitrogenous oil, iodine, iron, phosphates, potash, with certain other mineral salts, a bitter extract, and water. Its volatile oil, which is rich in nitrogen combined with some sulphur, is the sulpho-cyanide of allyl. Thus this familiar plant is so constituted as to be particularly curative of scrofulous affections. Dr. King Chambers writes (*Diet in Health and Disease*): "I feel sure that the infertility, pallor, fetid breath, and bad teeth which characterize some of our town populations, are to a great extent due to their inability to get fresh anti-scorbutic vegetables as articles of diet; therefore I regard the Water Cress seller as one of the saviours of her country."

Tennyson, the faithful poet of nature, tells in the rippling musical metre of his famous Brook :—

> "I linger by my shingly bars,
> I loiter round my Cresses."

Again, on account of its chemical constituents, this herb is deservedly extolled as specific against tubercular disease, particularly of the lungs. Haller says : "We have seen patients in deep decline cured by living almost entirely on this plant." Its active principles are at their best when the herb is in flower. The leaves remain green when grown in the shade, but become of a purple-brown (because of their iron) when exposed to abundant sunshine. In France the Water Cress, accompanied by oil and vinegar, is eaten at table, with chicken, or with a steak. The Englishman takes it at his morning, or evening meal, with bread and butter, or at dinner in a salad. The plant contains 2 per cent of sugar, and a little starch.

> "Our Cambrian Fathers, sparing in their food,
> First broil'd their hunted goats on bars of wood:
> Sharp hunger was their seasoning ; or, they took
> Such salt as issued from the native rock ;
> Their sallading was never far to seek,
> The poinant watercress, and sav'ry leek."—*Art of Cookery.*

The Latin name *Nasturtium* has been given to this Water Cress because of its pungency when bruised and smelt at, from *nasus*, a nose, and *tortus*, turned away ; it being, so to say, "a herb that writhes, or twists, the nose."

The true Nasturtium (*Tropæolum majus*), or Indian Cress, is cultivated in our gardens as an ornamental creeper, with brilliant orange-red flowers, and producing familiar "nuts," or "cheeses," resembling those of the mallow ; which serve also as a substitute for capers in pickle. This plant partakes of the sensible and useful qualities of the other Cresses. The flowers make a pretty, palatable, and wholesome addition to salads ; the bruised leaves emit a pungent smell ; whilst the flowers by themselves (resembling golden helmets) give out a quite distinct, and delicious scent.

For the cleansing and healing of scrofulous sores a Water Cress cataplasm, applied cold, in a single layer, and with a pinch of salt sprinkled thereon, makes a most useful poultice ; as also for resolving glandular swellings. Water Cresses squeezed and

laid against warts were reputed by the Saxon leeches to work a certain cure on these excrescences. Herrick, the joyous poet of "dull Devonshire," dearly loved the Water Cress, and its kindred herbs. He piously and pleasantly made them the subject of a quaint grace before meat :—

"Lord, I confess, too, when I dine,
The pulse is Thine ;
And all those other bits that be
There placed by Thee :
The wurts, the perslane, and the mess
Of watercress."

Persons who drink too freely overnight, appreciate the Water Cress for its power of dissipating the fumes of the liquor next morning.

The Garden Cress (called *Lepidium sativum*, from *satum*, a pasture) is the sort which is commonly coupled with the herb Mustard in our familiar "Mustard and Cress." It has been grown in England since early in the sixteenth century, and its other name, *Town Cress*, refers to its being cultivated in "tonnes," or enclosures. The plant contains sulphur, and a special ardent volatile medicinal oil. Its small leaves, in combination with those of our white Garden Mustard, are excellent for relieving rheumatism, and gout. This Cress is further a preventive of scurvy, by reason of its mineral salts. "Being green," said Wm. Coles, in his *Paradise of Plants* (1650), "and therefore more qualified by reason of its humidity, the Garden Cress is eaten by country people, either alone with butter, or with lettice, and purslane, in sallets, or otherwise." It was known of old as "Passerage" (from *passer*, to drive away, and *rage*, madness) because of its reputed power to expel hydrophobia. Thus the twin plants Mustard and Cress are happily consorted for invalid use, playing a common curative part like the "two single gentlemen rolled into one" of George Colman the younger. As already stated, they are especially rich in curative volatile salts during April and May. By a fortunate correspondence it is in the spring time that scrofulous and scorbutic affections become most active, because of the bodily humours being then in a ferment. "How to know ye King's Evill," as stated in the *Arcana Fairfaxiana* (1610), "is to take a grounde worme alive, and lay him upon ye swelling, or sore, and cover him with a leafe. Yf it be ye disease ye worme will change, and turn into earth ; yf it be not, he will remain whole, and sounde."

CUCUMBER.

BELONGING to the Melon tribe of plants, our Cucumber (*Cucumis sativus*) has been known and cultivated in North Western India for more than three thousand years. This is the only fruit we eat while still green without being cooked. Speaking generally, it is thought to be a questionable article of food, except for persons of rude, vigorous digestive powers. "But," says the *Boston School Cooking Magazine* (1897), "when eaten before the seeds are hardened, fresh from the vine, and without adding vinegar, or soaking in salt water, the Cucumber is more wholesome, nourishing, and digestible than the apple." Dr. Hutchison now tells us, on the contrary, that the Cucumber contains only 4 per cent of solids in its whole bulk, and is a type of one of the least nourishing of vegetables. Yet it must be said that for centuries past, the Cucumber has formed the staple diet of the people of Persia. In the time of our English George the First, a want of courage was popularly imputed to tailors, insomuch that nine of these pusillanimous worthies were needed to make one man; and, as report went, "'Tis the opinion of our curious virtuosos that their lack of bravery ariseth from the immoderate eating of Cucumbers, which too much refrigirate their blood." "I be that fond ov cowcumbers," says the Devon peasant, "I cüde aight um tü ivery meal, but I can't digest um." Forty years or more ago even persons of title would talk of "Cow-cumbers"; whilst apple *pie*, and cherry *pie*, were the correct things, all the others being *tarts*. In the Levant, writes Tavernier, "If a child cries for something to eat, a raw Cucumber is given to it instead of bread."

The fact is well worthy of notice here that if our garden herb, the Salad Burnet (*Poterium sanguisorba*, so called *quod sanguineos fluxus sistat*) be more cultivated, and used, its small, finely-cut leaves, which have a distinct flavour of Cucumber, may be substituted, so as to convey without any disagreement of digestion the desired flavour to those delicate persons who are debarred from taking the real thing. These leaves when put into a cool tankard "give," says Gerarde, "a grace in the drynkynge." Allied to the Salad Burnet is the Pimpernel, *Pimpinella*, containing saponin, such as the Soapwort also furnishes. These herbs are of approved utility for subduing irritation of the urinary passages. Also as to the wild Pimpernel, or familiar little

"Poor Man's Weather-glass," its decoction is held in esteem by country folk for checking pulmonary consumption in its early stages. Hill says there are many authenticated cases of this formidable disease having been absolutely cured by the said herb. Both it and the Soapwort (Miss Mitford's "*Spicer*," in *Our Village*), exercise special virtues against inveterate syphilis. The Cucumber tribe of plants (*Cucurbitaceæ*) includes the Colocynth, which is a powerful purgative, and the Bryony, which is highly poisonous. A certain acrid principle pervades the whole order; when this is greatly diffused, as in our cultivated Cucumber, the Water Melon, and the Pumpkin, the fruits are edible, and even delicious. But the stem end of the Cucumber is generally bitter, and the whole vegetable proves with some persons somewhat laxative. When the wife of the great Socrates threw a teapot, or something less refined, at his erudite head, he remained "as cool as a Cucumber" (Colman's *Heir at Law*). Cucumber ointment, of modern manufacture, from the juice of the green pulp, mixed with lard, suet, and rose water, is remarkably emollient, cooling, and healing, whilst grateful to the sense of smell. The Germans put Cucumbers in salt until they undergo a vinous fermentation; the Dutch treat them with hot pepper.

CURRANTS.

(For Garden Currants—*Black, Red and White*—*See* Fruits.)

The dried Currants which are put into mince pies, cakes, and puddings are small grapes grown originally at Zante, near Corinth, and hence named Corinthians; then they became Corantes, and eventually Currants. Presently the name of Currants was transferred in the Epirus to certain small fruits of the gooseberry order which closely resembled the grapes of Zante, but were identical rather with the fruit Currants growing on bushes in our kitchen gardens. The grocers' Currants of to-day come from the Morea, being small grapes dried in the sun, and put in heaps to cake together; then they are dug out with a crowbar, and trodden into casks for exportation. Our national plum pudding cannot be properly made without including a good proportion of these Currants. Former cooks, as we learn from a poet of the middle ages:

> "Buttered currants on fat veal bestowed,
> And rumps of beef with virgin honey strewed."

In Manchester sandwiches made with these Currants, and known as Eccles Cakes, are very popular. When Alice (in *Wonderland*) had dwindled down alarmingly to a diminutive stature, she found a little glass box lying under the table of the Rabbits' hole Hall, and containing a very small cake, on which the words "Eat me" were beautifully marked in Currants. She ate a little bit, and then said anxiously to herself, "Which way? which way?" "Curioser, and curioser," cried Alice; "now I'm opening out like the largest telescope that ever was." The small Corinthian Raisins, or "Currants," were formerly known as "Passulæ Minores"; they have a vinous odour, and a sweet, acidulous taste; the pulp is demulcent, but the skin is hard, wrinkled, and seldom completely digested. In a certain large lunatic asylum, where the patients partook commonly of Currant buns, the tough fruit skins, almost unchanged by any digestive process, were found by the bushel at the bottom of the washing-tub in which the dirty linen had been put to soak. "Eleven million bacteria," says a German scientist, "inhabit the skins of every half pound of Currants. It would be no small job to remove the skin from each Currant in accordance with the latest recommendation of science, but much better to work half a day over a saucerful than be dead the rest of one's life! Similarly, too, by the time Tomatoes are peeled to get rid of the surface bacteria, and seeded to avoid the danger of appendicitis, there won't be much left, to be sure; but then what remains will at least be healthful." From these Currants a sweet, oily kind of wine is made in Greece.

CURRY.

By Curry we understand a condimentary compound made of such spices (powdered) as Capsicum, Coriander, Ginger, Caraway, Cardamom seeds, Cassia, Chillies, Cloves, Cubebs, Cumin-fruit lobes, Fennel, Garlic, Mace, Mustard, Pepper, Nutmeg, Allspice, Fenugreek, and Turmeric resin in powder. Curry as a dish is of immemorial use in India. The word is derived from a native term "Kari," used by the natives to denote the leaf of a plant belonging to the Orange tribe, *Murraya exotica*. This leaf always forms an integral part of the Tamil Curries. Other authorities declare that the word Kari signifies a relish, or sauce, or even the "bazaar" where spices are bought. In India there are at least

three separate classes of Curry—the Bengal, the Madras, and the Bombay. Of these the first is the purest, and best, the high old superlative Curry. The Bengal *chef* excels most in fish and vegetable Curries. Bombay boasts of its special gifts in bombelon fish, and its popedones. Sir George Birdwood insists on always including in a Curry the leaf, or its essence, of the *Murraya kœnigii*. Others advocate the grated pulp of a cocoanut, with a little of its milk. The Curry powder must be thoroughly cooked with the dish, and not merely added thereto at the last moment. Rice forms the invariable adjunct to every dish of Curry, this being first washed in several waters before it is cooked. Curried rice is very useful for serving with eggs, or for adding to mulligatawny. It is prepared by putting half a pint of rice in a saucepan with a dessertspoonful of good Curry powder, and one of finely-chopped onion; season with salt, and pour over it one pint of boiling water. Let it cook about ten minutes, or till nearly done (it should soak up all the water); stir it up well. Lay a clean cloth over the saucepan, and put it to stand in a warm place until required. It is always better for standing an hour to dry, and finish cooking. Some rice will require a little more water. The several condiments which are employed in mixing Curry powder, as already signified, exercise each some special virtue as a medicament, which reference thereto under its particular heading here will explain, and will indicate its special use.

In the early English *Forms of Cury* (1390), two "Cury," or Curry powders are supplied, "forte," and "douce," which gave a designation accordingly to certain highly-spiced indigenous dishes of that date. Curries are therefore (as Dr. Thudicum alleges) native also to England, and by no means an exclusive importation from Hindustan. Sir J. C. Tennent, of Ceylon, has, however, praised the unrivalled excellence of the Singhalese in the preparation of their innumerable Curries, each of which is tempered by the delicate creamy juice expressed from the flesh of the cocoanut. For domestic Curry, butter, if it can be afforded, should be used instead of dripping; and half a teacupful of shredded cocoanut, with a sour apple, chopped fine, should be added before stewing. A plain Curry is made in India even of toasted bread, cut in dice, and fried brown. For a vegetable Curry, chop four onions, and four apples; put them in a pan with a quarter of a pound of butter, and let them fry a light

brown; add a tablespoonful of Curry powder, a little stock or milk, and some salt. This is a digestible, warming dish.

Those of the ingredients contained in Curry powder which do not find detailed notice in these pages, may be shortly summarized as to any remarkable properties. Cardamom seeds are from a plant allied to ginger, being brought from Bombay, and Madras; they are aromatic by reason of a volatile oil, which is fragrant, and is found to contain manganese. Cassia is a cheaper and coarser kind of Cinnamon, for which it makes a fairly excellent substitute. Coriander, an umbelliferous herb, furnishes aromatic seeds, being now grown for the purpose in Essex; these seeds are cordial, but narcotic if used too freely; the green herb (seeds and all) stinks intolerably of bugs; nevertheless the fruits are generally blended with Curry powder. By the Chinese the Coriander seeds are believed able to confer immortality. The Manna of the Israelites is likened (in the Book of Numbers) to Coriander seed; and nowadays this seed is often mixed with bread in the north of Europe. Cumin is common in Egypt as a fruit of which the seeds, in odour and properties, closely resemble caraways, but are stronger. These seeds are put into bread in Germany, and into cheese in Holland. The volatile oil of the fruit contains *cymol*, and *cuminol*, which are redolent of lemon, and caraway odours; it signally diminishes nervous reflex excitability when given from two to six drops on a small lump of sugar. Fenugreek (or *Fœnum græcum*) is an Indian fodder plant, its seeds having a strong smell, and a bitter oily taste, these being mucilaginous and emollient, like linseed, or the marsh mallow. Turmeric, which gives the yellow gamboge colour to Curry when served at table, possesses tubers which yield a deep yellow powder of a resinous character. The Cubeb is a pepper from Java, possessing an odorous volatile oil, and a resin, contained in the dried berries of a climbing shrub; these principles will stimulate the intestines against constipation, and diffuse warmth; furthermore, they will serve to soothe irritable urinary passages. All such Spices, and tropical condiments prove of valuable antiseptic use against Cholera, Fever, and Dysentery, by destroying the microbes of these diseases. Curry powder, therefore, as a whole, if genuine, is undoubtedly a combination which exercises divers medicinal effects of a salutary sort when taken at table.

Chutney, again, or Chutnee, is in the East Indies well known

and esteemed as a condiment, composed of sweet and acid spices, the usual ingredients being ripe fruit (mangoes, tamarinds, cocoanut, and raisins), with sour herbs, also Cayenne, and lime-juice. These are powdered, and boiled together, being either used straightway, as in making stews, and Curries, or bottled for future occasions. Likewise Mulligatawny is a spiced, or curried soup, of hashed chicken and rice. It has derived its Indian name from the Tamil words "*mollegoo*," pepper, and "*tumnee*," water. This said "*pepperwater*" is useful as a sauce to accompany rice. English cooks employ *broth* as a foundation.

CYGNET.

By the Romans the Swan, first deprived of its sight, was fattened for the table. In Chaucer's time the meat of a plump Swan was evidently in favour for giving a good ruddy complexion to the men of that day. We read respecting the Monk, in the *Canterbury Tales* (1385) :—

"Now certainly he was a fayre prelat ;
He was not pale, as a forpinëd gost ;
A fat swan loved he best of any rost."

Pepys tells in his *Diary* (January 19th, 1662) : "To Mr. Povy's, where really I made a most excellent, and large dinner, he bidding us, in a frolique, to call for what we had a mind, and he would undertake to give it us ; and we did, for prawns, *Swan*, venison, after I had thought the dinner was quite done, and he did immediately produce it, which I thought great plenty." In more modern days a different experience is recorded : "When I was a girl my father shot a Swan—a wild one, as he thought—passing over our village before a storm. Alas ! it belonged to a nobleman, his dearest friend, and was only taking a frisk round on its own account from the lonely lake where it lived. That bird was skinned for its plumage, and throughout many winters I was the envy of the whole village with a boa, muff, and cuffs of Swansdown feathering. The slaughtered bird was straightway spitted for roasting, and basting. Oh ! the smell ! ! Whitby after a great catch of herrings wouldn't have been in it ! The maids turned sick, my grandmother and aunts followed suit, also my grandfather ; furthermore, a groom called in for the job turned sick in like fashion ; and then, with the confidence of youth, I volunteered to baste that Swan ! At

last, amid great excitement, he was ready, with the gravy made, and a dish found big enough to hold him; and then with a solemn procession of the family he was served in state. Several of the neighbours came in to have a taste; but, sad to relate, a taste was enough! Of all the tough, stringy, fishy meats I ever tried, that Swan was the worst! Our efforts ended with hacking just a few slices from the breast; but what the legs and wings were like was left unproved. The mistake was that this old Swan had long passed the Cygnet stage."

There is, or was, a Swan pit at Norwich, where Cygnets had their abode for table purposes, being specially fed with this view; and it has been declared that a wild Swan, if killed when young, equals in appetizing flavour a wild duck. The Cygnet should be prepared and trussed like a goose, receiving a stuffing of which three pounds of minced rump steak are an essential ingredient; it is then wrapped in oiled paper, next in water-paste, and again oiled paper, and roasted like venison; the package requires roasting for at least four hours before a large fire on the spit. It must be frequently basted with butter made liquid by melting. Or, it would be far preferable (says Dr. Thudicum) to bake the Cygnet in a good oven. The popular notion, derived from Chaucer's *Parliament of Fowls*, has no foundation in fact, that "The jealous Swan agens hire deth that syngeth." In Germany giblet pie is a well-known dish, the giblets being stewed with pork chops, and pears, whilst flavoured with sugar, and cloves. The giblets of a Cygnet are esteemed an ambrosial morsel, and form a lordly dish. In England, on the Thames-side, a supper of two Cygnets is served annually for appreciative guests at the "Coach and Horses Inn," Barnes.

DATE.

The fruit of the Date Palm (*Phœnix dactylifera*), or Tree of Life, is the most nourishing of all our imported tree products, by reason of its abundant, and luscious sweetness. The name Phœnix has been bestowed on the Date Palm, because a young shoot springs always from the withered stump of an old decayed Date tree, taking the place of the dead parent; and the specific term "dactylifera" refers to the fancied resemblance between the fruit clusters and the human fingers. Children especially appreciate dates, and benefit by their plentiful sugar (about

an ounce to the pound), which is readily digested, and which freely furnishes bodily warmth, and fat. With such a view doctors now likewise advise Dates for consumptive patients; moreover, by their mucilage these serve to soothe an irritable chest, and to promote expectoration; again, they tend to obviate a costive state of the bowels. The Arabs say that Adam, when expelled from Paradise, took with him three things—the Date (chief of all fruits), the Myrtle, and an ear of Wheat for seed. Those Dates which surpass all others in general excellence, are grown with much care at Tafilat, inland from Morocco. Dates of a second quality are brought from Tunis, intermixed with fragments of stalk, and branch; whilst the inferior sorts come in the form of a cake, or paste, being pressed into baskets. Dates will as a food prevent exhaustion, and will help to keep active the energies of mind, and body. The fruit should be selected when large and soft, being moist, and of a reddish-yellow colour outside, and not much wrinkled, whilst having within a white membrane between the flesh and the stone. In a clever parody on Bret Harte's "Heathen Chinee," an undergraduate at one of the Universities is detected in having surreptitiously primed himself before examination thus:—

> "Inscribed on his cuffs were the Furies and Fates,
> With a delicate map of the Dorian States;
> Whilst they found in his palms, which were hollow,
> What are common in Palms, namely, dates."

A conserve is prepared by the Egyptians from unripe Dates, whole, with sugar; the soft stones, being then edible, are included; and this jam, though comparatively tasteless, is very nourishing. Oriental writers have attributed to the Date Palm a certain semi-human consciousness. The carbohydrate of Dates is almost solely sugar. Half a pound of the fruit, and half a pint of new milk, will make an ample satisfying repast for a person engaged in sedentary work. An ounce of Dates contains twenty-seven grains of proteid (primary food-elements). In Arabia milch cows, and donkeys, are fed with unripe Dates boiled down with the ground stones, and with fish-bones. For Date-bread, which is nutritious, and gently laxative: "Break the Dates apart, wash, and drain them in a colander; shake them well, and set them in a warm place to dry. Stone, and chop enough to make a cupful, and knead into a loaf of white, or brown bread, just before setting it to rise for the last time."

Again, for stewed Dates: "Break the Dates apart, and wash them first in cold water, then in hot water; drain them, and cover with cold water. Cook for a very few minutes until tender; take out the fruit, add a little sugar to the water, and boil for five minutes; pour it over the Dates, and set them away to become cold." Among fruits which serve to strengthen the sexual functions may be specially reckoned the Date. A lesson of interdependence as to the power of the small to assist the great is taught by a proverb, "The Date-stone props up the water-jar." Tafilat Dates, even when of excellent quality, soon become dry, and tough on exposure, after being purchased from the grocer; but their succulence and plumpness may be retained by putting them into a good-sized glass prune-bottle, with a screw metal top, sprinkling them freely therein with moist sugar, and a teaspoonful or two of water for moisture.

DIET.

"'Tis the art of eating which makes for years," says a sage proverb, and nothing can better promote this art for personal benefit than a sufficiently accurate knowledge of food elements, and their respective uses in the body. Broadly speaking, the sustenance on which we depend for the support of our lives comprehends animal and vegetable substances, besides our beverages. The more readily and thoroughly these substances are absorbed for supplying our physical needs, the better adapted are they for the purposes required. Residual matters are voided as excrementitious, the fact being, nevertheless, that the fæces passed by stool consist not simply of the remains of unabsorbed foods, but also to a considerable extent of superfluous digestive secretions, and the *débris* of intestinal linings. On a purely animal diet (of milk, eggs, and beef, or mutton) there is but little primary food-constituent (nitrogen) lost in the excrement; but when vegetable foods are mainly taken (carrots, potatoes, peas, and the like) the waste of nitrogen is very considerable, amounting, as, for instance, in the case of carrots, to nearly 40 per cent of the whole primary elements consumed.

The foodstuffs, again, which provide bodily warmth, and serve to fatten, are termed by chemists carbohydrates, containing twice as much hydrogen as oxygen; these include fruit-sugar, cane-sugar, milk-sugar, starch, and the same when made

soluble by the saliva, being then known as dextrine; also cellulose, the basis of vegetable structures. Starch, and the sugars, are almost completely digested by a healthy person, and are sucked up into the blood nearly to the last particle; it being at the same time an important circumstance that a relatively larger amount of primary food-constituents is excreted by the bowels on a vegetable than on an animal diet. "Why these primary constituents of vegetable foods should be so much less completely absorbed than the other ingredients is difficult to say." Human saliva is peculiarly rich in the ferment (diastase) which changes insoluble starches of foods into soluble dextrine, being richer apparently than the saliva of any other animal. The human stomach and the human brain are justly said to be the only analysts which never make mistakes.

It is on material food, comprising the particular constituents now discussed, reliance must be placed for supplying vital energy, and bodily health; nitrogen as primary nourishment, and carbon as fuel, being the chief elements. Nitrogen enters the body as such, and leaves it as waste urea; carbon enters the body as fat, starch, and sugar, leaving it in carbon dioxide. Gain or loss of nitrogen signifies gain or loss of flesh-tissues, whilst gain or loss of carbon signifies gain or loss of fatty deposits, and of bodily warmth. In dealing with weak or impaired digestions the cook can render valuable aid by carrying out as regards the food one or other of three distinct processes; each of these serves to commence the digestion of food by culinary skill before it is given to the invalid, so that the digestive powers are thus considerably economized: First, by malting, or pre-digesting the starches; secondly, by mixing with the meat foods and albuminoids some pepsin, or such ferment as converts these foods into soluble peptones; and, thirdly, by making an emulsion with sweetbread-juice of the fatty food which has to be digested after leaving the stomach, whilst within the first bowels.

"We may live without poetry, music, or art,
We may live without conscience, and live without heart,
We may live without friends, we may live without books:
But civilized man cannot live without cooks."

Witty Mr. Punch has lately anticipated the substitution of clean, clever electricity for cooking, in place of black, smutty, clumsy kitchen coal, with its dust, and its difficulties of transport.

Then, instead of a hot, fiery task, disastrous to the temper, and comfort of the cook, it will be a recreative amusement for ladies to prepare the daily dinner.

> " You need only turn a handle, and the soup is boiling hot,
> Appetising odours rising from the hospitable pot.
> Turn another, and the salmon in its mayonnaise lies fair ;
> Press a button, and the mutton, with the currant jelly's there;
> Press again, and sweets, and entrées will at once appear in sight,
> And you'll fall to, on them all too, with a first-class appetite."

A diet of lean meat exclusively will build up the tissues, but if nothing else be taken, then the fat already stored up in the body will be fed upon, and consumed, so that the person will become thinner. Bismarck, by the advice of his physician, reduced his bulk in this way without any loss of energy, or any sense of illness. Again, we have to depend upon what we eat and drink for mental power, and intellectual capabilities. " So many factors," says the *Century Invalid Cookery Book*, " enter into the make-up of a thought, that it cannot be said that any particular kind of food will ultimately produce a poem ; but of this we may be sure, that the best work, the noblest thoughts, the most original ideas, will not come from a dyspeptic, underfed, or in any way ill-nourished individual." Swift, as a writer, was fully alive to this fact. " I wish you a merry Lent," quoth he, in a letter to Stella (March 5th, 1711). " I hate Lent : I hate different diets, and furmity, and butter, and herb porridge, and sour devout faces of people who only put on religion for seven weeks." Not that a highly elaborate diet is essential for vigour of brain. " *Hominis cibus utilissimus simplex,*" said Pliny authoritatively.

> " Nam variæ res]
> Ut noceant homini credas, memor illius escæ
> Quæ simplex tibi sederit."

> " For, divers meats do hurt ; remember how
> When to one dish confined thou healthier was't than now."

Horace Walpole, writing from Norfolk (1743) to his friend John Chute, put the matter thus : " Indeed, my dear Sir, you certainly did not use to be stupid ; and till you give me more substantial proof that you are so, I shall not believe it. As for your temperate diet, and milk, bringing about such a metamorphosis, I hold it impossible. I have such lamentable proofs every day before my eyes of the stupefying qualities of ale, beer, and wine,

that I have contracted a most religious veneration for your spiritual nouriture. Only imagine that I here every day see men who are mountains of roast beef, and who only seem just roughly hewn out into the outlines of human form, like the great rock at Pratelino! I shudder when I see them brandish their knives in act to carve, and I look on them as savages that devour one another. I shouldn't stare at all more than I do if your Alderman at the lower end of the table was to stick his fork into his neighbour's jolly cheek, and cut a brave slice of brown and fat! Why, I swear I see no difference between a country gentleman and a sirloin; whenever the first laughs, or the second is cut, there run out just the same streams of gravy." In Moxon's *Life of Edmund Kean*, the famous actor, we are told that Mossop, another stage celebrity, chose his dish to suit the character he was about to assume: "Broth," said he, "for tone; roast pork for tyrants; steaks with 'Measure for Measure'; boiled mutton for lovers; pudding for Tancred, etc." James Howell, contemporary with Sir Kenelm Digby (1603), commended to Lady Wallis a Spanish cook "who hath intellectuals, and senses; mutton, beef, and bacon are to her as the will, understanding, and memory are to the soul. Cabbage, Turnip, Artichoke, Potatoes, and Dates are her five senses, and Pepper the common sense. She must have marrow to keep life in her, and some birds to make her light."

As to the question of how to maintain the body properly nourished under adverse conditions, "Like all divine truths," said Dr. K. Chambers, "to love your neighbour as yourself is found to be taught by material nature as well as by revelation. Respecting the effect of practical benevolence, and philanthropy, upon our race, the fact is highly convincing that directly a man begins to care for others in preference to himself alone, his cares cease to wear and exhaust him. There rather seems to be herein a sustaining force. This is the reason why in sieges, and famine, medical men have often remained sleek, and plump, while their neighbours pined; and perhaps also why military officers bear short rations better than the men." As to regulating the food in quantity, or precise chemical constitution, according to tables of percentages, and the like, which are dry calculations (in a double sense) rather than of any sure practical use for individual consumers, we may take a lesson from the Captain Gulliver of Swift's tale; "for whom a coat, waistcoat, and

breeches were constructed on abstract principles by the pragmatic tailor at Laputa, these garments turning out therefore the worst suit of clothes ever had in the Captain's life." It will certainly prove a similar failure to overlook the numberless contingencies in the daily life, and the numberless personal peculiarities of those who seek advice about their diet, and daily regimen. Dr. Talmage, of New York City, preached the doctrine that a man's food, when he has opportunities of selecting it, suggests his moral nature: "Many a Christian tries to do by prayer that which cannot be wrought except by correcting his meat and drink."

To sum up the whole question of a man's diet, "surely the teaching of pathology amounts to this, that the fortifying of the general resistance of the individual against illness, and disease, is the most important indication of all to be fulfilled. Real true advances in the prevention, and cure, of diseases always tend to simplification; and the truest fundamental therapeutic remedies are fresh air, sunshine, excellent plain food in ample quantities, and regulated exercises mainly out of doors. This, certainly, is the innermost purpose of what is now called the Sanatorium treatment." Also, "the food of a nation," writes Dr. Andrew Wilson, "is largely determined by its geographical boundaries; dyspepsia seems to be often a matter of geography. The Northman can eat, enjoy, and assimilate what would certainly kill the Southerner; and conversely the food of the latter would fail to nourish the former. When one is in Rome, or South Africa, or Finland, it is best as far as possible to adapt one's feeding arrangements to the environments, unless of a very temporary nature. This plan will be found to work out better than adherence to the customary home-diet rules. It is quite possible therefore to imagine persons who must perforce pursue a strictly careful dietary regimen at home, getting along famously well on biltong and coffee when settling down in South Africa."

> "A widow has cold pye; Nurse gives you cake;
> From gen'rous merchants ham, or sturgeon take.
> The farmer has brown bread, as fresh as day,
> And butter fragrant as the dew of May."
>
> *Art of Cookery* (1708).

A well-known physician of Bradford says (*Medical Aphorisms*): "The meaning which doctors intend when enjoining care about

diet should be interpreted thus: If you are excessively careful you will eat only once a day, say about eight ounces of mixed diet; if you are very careful you will eat twice daily, eight ounces at one meal, and four ounces at the other, of ordinary mixed diet; if you are moderately careful you will eat thrice a day, eight ounces at one meal, and from four to six ounces at each of the other two; say at 8 a.m., at 1 p.m., and at 7 or 8 p.m.; if you are careless you will eat four times a day, from two to three pounds in all of ordinary food; if you are reckless you will eat five times daily, to the amount of four or five pounds of ordinary mixed diet. I know not what epithet to bestow on those who eat oftener than five times a day, and yet I have met with persons who ate eight times daily, and one person who ate ten times."

DRINKS.

(*See* ALE, BEER, COFFEE, MINERAL WATERS, TEA, WATER, *and* WINES).

A Spring beverage which in former days went by the name of *May-drink* in England, and several parts of Europe, was flavoured with the garden herb Sweet Woodruff (*Asperula odorata*); this, by reason of the coumarin it contains, is scented like the Sweet Vernal Grass of our meadows, and the Sweet Clover, each being most fragrant when freshly dried; such coumarin powerfully stimulates the brain. Withering tells that "the strongly aromatic flowers of Sweet Woodruff will make an infusion exceeding in spicy flavour even the choice teas of China." The powdered leaves are also mixed with fancy snuffs because of their enduring fragrance. Another species of the same herb is the Quinsy Woodruff (*Asperula cynanchica*), so called because a most useful gargle can be made from this plant by infusion in boiling water, against quinsy (cynanche), or other such sore throat. "Ahem!" as Dick Smith said when he swallowed the sponge, teaching to bear troubles bravely, and not to make a fuss about trifles. This herb is to be found growing in dry pastures, especially on a chalky soil; it has tufts of lilac flowers, and very narrow leaves. The Sweet Woodruff has small white blossoms set on a slender stalk, with narrow leaves growing around it in successive whorls, like the common well-known Goose-grass, or Cleavers.

The lassitude felt in hot weather on its first access in early

summer, may be well met by an infusion of Hop leaves, strobiles, and stalks, as Hop-tea, to be taken by the wineglassful two or three times in the day; whilst a more vigorous action of the biliary organs is also stimulated thereby. The popular nostrum "Hop-bitters" is thus made: Of Hops (dried), half a pound; of Buchu leaves, two ounces; boil these in five quarts of water in an iron vessel for an hour; when it is lukewarm, add thereto Essence of Wintergreen (*Pyrola*), two ounces, and one pint of spirit (Brandy, Whisky, or Gin). Take one tablespoonful three times a day before eating; it will improve the appetite considerably. Horehound Beer is much drunk by the natives in Norfolk. Again, Balm tea is highly restorative. Borage has a cucumber-like flavour, and when compounded with lemon, and sugar, added to Claret, and water, it makes a delicious "cool tankard" as a summer drink. A tea brewed from Broom tops, with bruised Juniper berries, is famous for increasing the flow of urine, and relieving dropsy. Black Currant leaves make a fragrant infusion as a substitute for China, or Indian tea. A scented Orange-water is largely prepared in France from the flowers, which is often taken by ladies as a gentle sedative at night, when sufficiently diluted with *Eau Sucrée* (sugared water); thousands of gallons are drunk in this fashion every year. "There's nothin so refreshing as sleep, Sir!" (quoth Sam Weller to his Master) "as the servant gal said afore she drank the eggcupful of laudanum." For, in the more serious language of Dr. Martineau, "God has so arranged the chronometry of our spirits that there shall be thousands of silent moments between the striking hours." Primrose tea exercises similar curative effects, though in a lesser degree, to those of the Cowslip; it is excellent against nervous disorders of an hysterical nature. Sage leaves add pleasantly, and with benefit to the refreshing contents of the afternoon teapot; and a Tamarind drink obviates putrid fevers.

DUCK.

The Duck (*Anas*), which has become included among our domesticated poultry for the table, is scarcely suited for persons of delicate stomach, because of its fat contained in large amount; otherwise it makes a savoury, nutritious food. This grease is a great anodyne, and of good service against distempers of the nerves; "anoynted it helps the pleurisie, and gout." Rouen,

in France, is famous for the superiority of its ducklings, which are not bled to death as in this country, but are killed by thrusting a skewer through the brain, so that the blood is retained in the flesh of the bird. Sydney Smith has told of an arch-epicure on the Northern Circuit, about whom it was reported "he took to bed with him concentrated lozenges of Wild Duck so as to have the taste constantly renewed on his palate when waking in the night." Again, Douglas Jerrold has recorded it of a certain man, "he was so tender-hearted that he would hold an umbrella over a Duck in the rain." Though tasty, succulent birds, Ducks are somewhat foul feeders; they will swallow any garbage, yet their preference is for slugs, and snails; if allowed to search for themselves in the early morning, and late evening they will soon fatten on these enemies of the gardener. By the early Romans the Duck, being a good swimmer, was sacrificed to Neptune. Plutarch assures us that Cato preserved in health his whole household through dieting them on roast Duck during a season when plague and disease were rife. In Brittany well-fatted Ducks are salted; also the breasts are pickled, and smoked for a week, then dried, and stored. The Chinese esteem Ducks' tongues, when dried, as dainties. Our Aylesbury white-plumaged Duck commands the highest price in the market, but the fibre of its meat is harder, and richer, than that of white-fleshed poultry. Dr. Kitchener (1820) bids the cook "contrive to have the Ducks' feet delicately crisp, as some people are very fond of them; to do which nicely you must have a sharp fire." As a "bonne bouche" with the roasted bird, "mix a teaspoonful of made mustard, a saltspoonful of salt, and a few grains of Cayenne in a large wineglassful of Claret, or Port wine; pour it into the Duck by a slit in the apron just before serving it up." By its brown meat, and abundant bird-fat, the Duck is particularly well suited for diabetic patients. This fat is in the domesticated bird lard-like, but in the related wild bird it is oily, and of more iodine value. The Chinese have a notion that such material food is acceptable to their friends even after death. A white man who was interested in a Chinese funeral asked why a Duck was left on the grave. Did they suppose the dead man would come back in the spirit to eat it? "Yeppe," replied the Boxer, "alle same as le white deadee man come out and smelle flowers!" Water-fowl, for some reason which is not explained, are not regarded as meat by the Roman Catholic

Church. Thus the Teal (*Sarcelle*) was pronounced some years ago by a conference of their leading ecclesiastics to be permissible for eating in Lent. But actually this bird is in season only from September until February.

EEL.

Belonging to the *Anguillidæ*, or Snake tribe, the Eel shares in some respects the characteristics of the Anguis, (or Choker), named thus on the same foundation as the Boa Constrictor. It is the hero of many fables, having been worshipped as a deity by the Egyptians. Later on the Eel stews of Mahommed the Second kept the whole Turkish Empire in a state of nervous excitement; and, again, one of the Eel pies which King Philip failed to digest caused the Revolt of the Netherlands. Jews decline to eat Eels, probably because of their similarity to serpents, which they formerly reverenced. An accolade of Eels on the spit used to be put every Saturday on the table of Anne of Austria, Queen of Louis XIII. The sea Eel contains 9 per cent of fat, and the river Eel 25 per cent, with 34 per cent of nutritive substance; this latter fish is well adapted as a food for the diabetic. For cooking, silver Eels should be chosen, fresh, brisk, and full of life; "such as have been kept out of water till they can scarce stir are good for nothing." Yellow Eels taste muddy. In order to kill the creatures (which are most tenacious of life) instantly, the spinal marrow should be pierced close to the back part of the skull with a skewer sharply pointed; if this be done in the right place all motion will instantly cease. The humane executioner favours certain criminals by "hanging them before he breaks them on the wheel." Eels were at one time a staple English food, since they supplied almost the only animal nourishment to which the poor could aspire. Likewise they were early favourites in the monasteries. About Italy Eels are eaten for breakfast, dinner, and supper by the masses; they grow to a large size, and are reputed to be of excellent flavour. The Conger Eel, which is caught on our rocky coasts, and especially round the Channel Islands, is a much larger fish, with an average length of from three to four feet; sometimes of even far more gigantic conditions—"*Monstrum horrendum, informe, et ingens*," weighing from seventy to eighty pounds. These Eels are dried by the French, and Italians, in the sun, when

opened and flattened out, under the name of *Conger douce*. If ground down into powder they help to enrich soups by being admixed therewith, especially mock-turtle soup, according to Frank Buckland. Also the Conger Eel is cooked in a pie. Because of sometimes containing a special toxin, this Eel will occasionally induce a choleraic attack. "Though the fresh-water Eel, when dressed," writes Izaak Walton, "be excellent good, yet it is certain that physicians account it dangerous meat." "Eels," says Paulus Jovius (Burton), "he abhorreth in all places, and at all times; every physician detests them, especially about the solstice." The Eel's blood contains a highly poisonous principle which asserts its dangerous properties if injected into the human blood, but which becomes inert under the process of digestion when Eels are taken as food. For Alice (*in Wonderland*) an old Conger Eel was the "drawling master, who came once a week to teach drawling, stretching, and fainting in coils." The skin of an Eel is employed by negroes as a remedy against rheumatism. Formerly our sailors, when they wore pigtails of the hair behind the head, encased the same for protection, and neatness, in an Eel skin. Again, a "salt Eel" was formerly an Eel skin prepared for use as a whip. Pepys relates in his *Diary* (April 24, 1663): "Up betimes, and with my Salt Eele went down in the parlor, and there got my boy, and did beat him until I was faine to take breath two or three times." The skin of an Eel is hard, tough, and dark of colour, with an oily fat just underneath; it can be pulled off like a stocking after first cutting a circular incision round the Eel's neck. Robert Lovell (1661) protested that mud-begotten Eels "fill the body with many diseases; they are worst in summer, but never wholesome." And a curious old ballad tells the same story as having befallen "*the croodlin' doo*":—

"O, whaur ha'e ye been a' the day,
My little wee croodlin doo?
O I've been at my grandmither's:
Mak' my bed, mammie, noo!

"O what gat ye at your grandmither's,
My little wee croodlin doo?
I got a bonnie wee fishie:
Mak' my bed, mammie, noo!

"O whaur did she catch the fishie,
My little wee croodlin doo?
She catched it in the gutter hole:
Mak' my bed, mammie, noo!

" And what did she do wi' the fishie,
My little wee croodlin doo ?
She boiled it in a brass pan :
Mak' my bed, mammie, noo !

" And what did ye do wi' the banes o't,
My little wee croodlin doo ?
I gi'ed them to my little dog :
Mak' my bed, mammie, noo !

" And what did your little doggie do,
My little wee croodlin doo ?
He stretched out his head, and feet, and dee'd :
Mak' my bed, mammie, noo ! "

The Lamprey (*Petromyzon*, stone-sucker) is in appearance like a small Eel, having a mouth like the large end of a funnel, and dotted all over with small hook-shaped teeth ; also with tiny sacs instead of gills—seven on each side of the body near the head. It is found principally in the Severn, the Thames, and in Scotch waters. Formerly but little use was made of it, except to be dried, and burnt as a candle. The flesh is sweet, and good, and of much nourishment : it increases lust, and by reason of its richness easily causes surfeits if much eaten. The truth is that Lampreys, and Lamperns, contain an abundance of fish oil, and are most profitable for persons of vivacious hectic temperament needing much caloric, and who betray consumptive tendencies, because of its rapid expenditure in their bodies. King Henry the First lost his life by eating Lampreys to excess. They should be stewed in their own moisture, with spices, and beef gravy added, and a little Port wine. A Lamprey is first a Lampron, then a Lampret, then a Lamprell, and finally a Lamprey. The Lampern is the river sort (*fluviatilis*). It has been related that the Romans fed Lampreys on the dead bodies of slaves, and that Pollio Vedius ordered a living slave who had maliciously broken a glass vessel to be " thrown to the Lampreys " (as if they were wild beasts). Platina reproved the Popes and great folks of Rome for their luxury in Lampreys, which they drowned in Cyprus wine, with a nutmeg in the mouth, and a clove in each gill-hole. The Lampern of the Thames is much smaller than the Lamprey of the Severn. Pliny tells that " Antonia, the wife of Drusus, had a Lamprey at whose gills she hung jewels, or ear-rings ; and that other persons have been so tender-hearted as to shed tears at the death of fishes which they have kept, and loved."

EGGS.

THE only complete food afforded by the animal kingdom is the egg: containing, as it does, all the alimentary substances required for the support, and maintenance of animal life. For their plentiful store of varied sustenance Eggs, in the hands of the cook, and the doctor, may be well described as veritable

"Treasure houses wherein lie,
Locked by angels' alchemy,
Milk and hair, and blood, and bone."

The early Christians took the egg as a symbol of their hope as to the body's resurrection. Broadly speaking, the domestic fowl's egg consists of yolk and white as edible parts, within the hard shell made up chiefly of carbonate of lime. When compared with moderately lean meat the egg contains two-thirds as much primary food (proteid), twice as much fatty substance, twice as much ash, and about an equal quantity of water. The proteid includes what chemists call nuclein, which affords phosphorus, as a nerve renovator, in organic combinations, some thereof being united to iron; but this is not in the Egg a source of uric acid, else eggs would be improper for gouty persons. Nevertheless, Dr. Haig (whose personal experiences are in several respects exceptional), maintains that Eggs do actually cause an increased excretion of uric acid. He says "I gradually eliminated from my diet all articles which contained even the smallest quantity of egg, having obtained very distinct evidence that these, when taken every day, decidedly increased with me the excretion of uric acid." Dr. Hutchison supposes, "the white of Eggs to be unobjectionable food for growing boys, but the yolk, though nearly a complete form of food (except for starches, which may be readily superadded by bread and butter), comprises something akin to the uric acid in meat. If it should be suspected that at any time the urine contains albumen, such as white of egg, then a simple bedside test which is sufficiently reliable may be easily employed. Four or five drops of the urine, as passed on first rising, should be put into a glass of clear hot water, when, if any albumen is present, it will be indicated by an opalescence. If the glass is held against a dark background, this opalescence will be very visible, and will be seen to spread through the water like a cloud of smoke. Phosphates in the urine will produce a similar appearance; but

on adding a little white vinegar, or acetic acid, the cloud will then immediately disappear; not so, however, if albumen be its cause. An average fowl's egg contains about one hundred grains of proteid food: as much of this, together with fat, as five ounces of new milk, but minus the sugar of milk. It is also reckoned to be the equivalent of rather under an ounce and a half of fat meat. The raw egg is somewhat laxative. Egg white is a capital substitute for raw meat juice. It consists of dissolved proteid enclosed within many thousands of cells; when this egg white is beaten up the cell walls are ruptured, and the proteid food-matter escapes. Some twelve per cent of egg albumin is present in the egg white, this being in no way inferior as regards nutritive value to the proteids of meat, save as lacking its vital force. One egg yields rather more than an ounce of white; and if to this be added twice its volume of cold water, and the whole quantity be then strained through muslin, there will be obtained three ounces of a clear solution containing as much proteid as an average specimen of commercial beef-juice." All that then remains to be done is to stir into the same a little Liebig's extract dissolved in a teaspoonful, or so, of warm water.

Animal albumin is thus to be got from the white of eggs; it may also be obtained from the serum (or thin liquid) of the blood, or from the juices of uncooked meat. Eighty-four dozen eggs produce from one to two gallons of the white, and this yields fourteen per cent of commercial albumin, while the blood of five oxen will supply about two pounds. The albumin is prepared for commercial purposes in a dry state. Dr. Carpenter showed that during hard work on the part of a labourer, a larger supply than usual of albuminoid food is necessary. In chronic Bright's disease, with passage of albumin from the kidneys in the urine, for the majority of cases the best food is that advised for gout, *i.e.*, a diet only moderately rich in *proteid*, and *that* chiefly derived from vegetable sources, and from which diet soups, and all preparations containing the extractives of meat are excluded.

The egg yolk contains lecithin, which embodies natural phosphorus in its most assimilable form, and which will serve to admirably recruit exhausted nerve structures through their leading centres when lacking vital energy. A confection of this lecithin principle is prepared by chemists for the use of children. Apples likewise contain similar lecithin, as a phosphorated compound,

such as exists naturally in nerve tissues, also in the blood, in fish sperm, and in certain of the cereals, as wheat and maize. When supplied in the yolk of eggs it stimulates the appetite, and leads quickly to an increase of bodily weight. The *Medical Record* tells *passim* that from the University of Chicago there has been issued a recipe for bringing about bodily bigness ; and that the age of the race of giants is about to begin again. Henceforward there will be no pigmies, because of a wonderful food-substance which makes men and animals grow fast, and large. This new food is lecithin. Dr. Hatai has experimented with it on white rats, and by feeding them with such nutriment made them grow sixty per cent faster than they grow ordinarily, the same being done even under atmospheric conditions and general surroundings which were unfavourable. Scientists say that lecithin will have a similar effect on human beings. The Professor named above finds that the growth induced thereby is normal, and embraces all parts, including bigness of heart, and of body, as well as of head. Furthermore distinct traces of arsenic are found by the chemist to be present in eggs.

A sagacious maxim teaches that "eggs (should be) of an hour, fish of ten, bread of a day, wine of a year, a woman of fifteen, and a friend of thirty."

In an egg laid only a few hours before, the white is milky, which circumstance sometimes leads to such egg being erroneously considered stale. When an egg has been newly laid it is always damp, and observation shows that the longer it remains wet, or is kept thus, by so much does it remain fresh ; obviously, therefore, eggs for preservation should be packed wet. The fats of egg yolk differ chemically from ordinary fats, they also contain a large measure of phosphorus, which is easy of assimilation. But the absence of other carbohydrates (starch, sugar, etc.) prevents eggs from being in any sense a complete food. It would moreover require twenty of them daily to supply even the amount of proteid necessary for a healthy man. The egg shell is mainly carbonate of lime ; that of the ostrich's egg is so thick, and hard, that it may seriously wound a man if the egg becomes rotten and explodes by reason of its compressed gases produced by decomposition.

"Dumptius in muro sedet teres, atque rotundus,
Humptius, heu ! cecidit ; magna ruina fuit.
Non hommes, non regis equi—miserabile dictu !
Te possunt sociis reddere, Dumpti, tuis."

In a boiled egg no air can come into contact with its nutriment until the same is broken for eating, which is an antiseptic security. Eggs are specially rich in fat, and therefore they satisfy the stomach. The ovo-lecithin constituent is chemically the distearo-glycero-phosphate of choline, and embodies phosphorus in its most readily assimilable form, as found in nature ; it is admirably calculated to recruit exhausted nerve centres, and to renovate from nerve fag. Concentrated tablets thereof are now made reliably by the manufacturing chemist. The yolk fats differ chemically from ordinary fats, being in reality phosphatides ; they exist as palmitin, stearin, and olein, just as in butter. A subcutaneous administration of egg yolk has recently been practised for cases of defective nutrition in infants, and as a substitute for lecithin. The injection, prepared by mixing the yolk of an egg with one-third of its weight of a saline solution, is made into one of the buttocks, and gentle massage is employed afterwards. The general nutrition, and the quality of the blood, are stated to improve more rapidly under this treatment than under lecithin taken as food.

For egg and sherry as a cordial of prompt use, with ready support, beat up an egg in a cup with a fork till it froths, add a lump of white sugar first dissolved in two tablespoonfuls of water, mix well, then pour in a wineglassful of dry sherry, and serve before it becomes flat ; or half the quantity of pale brandy may be used in place of the sherry.

The proper cooking degree of heat for boiling a fowl's egg is only one hundred and sixty degrees Fahrenheit, or fifty-two degrees below boiling point. If two eggs are taken, one of which is kept in water at a temperature of one hundred and seventy-five degrees for ten or fifteen minutes, and the other for an equal length of time in boiling water, it will be found at the end of the experiment that the contents of each egg are solid throughout, but that in the case of the former they consist of a tender jelly, whereas in the boiled egg they are dense, and almost leathery.

For delicate persons of all ages, the following preparation, which will contain egg shells in solution, has been found most singularly useful. Take six fresh eggs, six lemons, half a pound of castor sugar, and half a pint of white rum. Put the eggs in their shells inside a jar, without injuring the shells, peel the lemons, and, after removing their pith, squeeze the fresh juice over the eggs, then lay above them the rind and the pulp. Cover

the jar lightly, and put it in a cool place for seven days, not forgetting to shake it well on each day. At the end of that time strain through muslin, when it will be found that the lemon juice has dissolved the eggshells. Add the sugar, and the rum; then bottle and cork it tightly. A wineglassful taken each morning before breakfast is the full dose, but at first it may be desirable to give only half this quantity. Again, for the cure of certain weaknesses in women, egg shells when properly prepared are highly lauded in America. The shells are first broken up *in vacuo*, and then finely powdered in a mortar together with two-thirds of finely powdered sugar of milk. Dr. Edson tells of seventy consecutive cases treated thereby without a single failure.

An " egg foam " which can be quickly prepared, as in America, is particularly suitable for the passing needs of invalids : Separate one egg, keeping the yolk unbroken in half the shell, whilst beating all the white to a stiff froth. Heap this latter in a dainty little bowl, or egg cup, and make a small well in the centre, into which drop the yolk. Then stand the whole in a saucepan containing a little boiling water, cover the saucepan, and cook for one minute. Serve in the bowl, with a tiny bit of butter, and a few grains of salt. The Germans call frothed white of egg " snow." This froth is sweetened and scalded in milk, so as to become set. It then serves as the solid part of a refection whereat the liquid part is milk (perhaps with egg yolk). Such a dish, to be eaten with a spoon, is very refreshing at any time of the year, but particularly in summer, if it be well cooled. It is also a very excellent form of nourishment for persons who are suffering from one or another throat affection, or who have undergone some operation in the mouth or throat, and who cannot chew, or pulp with the tongue, but can yet drink the soft custard. A raw egg is not so easily assimilated after being swallowed as is one lightly boiled. The natural principles thereof are albumin, vitellin, lecithin, and nuclein. The egg albumin differs from that contained in the liquid serum of our blood as to certain physical properties, though closely allied to this. If the white of a newly laid egg be applied to a sore burn, or scald, it will keep out the air, and will do much to relieve the pain. Powdered egg shells will subdue acid indigestion from fermenting sour food in the stomach. On the assumption that ten milligrammes of iron are required daily by the average human body, then seven and a half eggs would

suffice for supplying this quantity, therefore egg yolk is to be regarded as a useful food for bloodless persons.

Dr. Hutchison thinks that as a matter of fact a raw egg seems scarcely digested in the stomach at all, but to be passed out therefrom to a large extent unchanged, being perhaps such a bland nutriment as not to excite the secretion of gastric juice, nor to stimulate the churning movements of the stomach. The absorption of lightly cooked eggs within the intestines appears to be very complete, leaving only a very small residue. When a person of delicate digestion is served with fried bacon and eggs, the latter should be poached separately, and then sent to table with the boiled, or fried bacon, or ham, on the same dish; there is "reason in roasting eggs." A fried egg, by reason of the melted fat coating the egg, and hindering the contact of the gastric juice in the stomach, remains imperfectly digested, and burdensome.

The omelette, formerly "*aume lette d' œufs*," is a pancake made of eggs, so called from a supposed phrase "*œufs melés*." It consists of eggs beaten lightly, with the addition of milk, salt, and sometimes a little flour, being browned in a buttered pan. Sometimes the omelette is prepared with cheese, ham, parsley, fish, jelly, or other additions. A suggestive French proverb runs thus: "*On ne fait les omelettes sans caisser des œufs*,"—"Omelettes are not to be made without breaking eggs."

A baked egg is good eating, and easy of achievement. Break a new-laid egg on to a thickly-buttered plate, strew it with pepper, and salt, and cook slightly in a moderate oven. It must be eaten exceedingly hot from the same plate, which may be attractively surrounded by a narrow frill of crinkled tissue paper. Eggs to be poached should be a couple of days old; if just laid they are so milky inside that the cook, take all the care she can, will fail to secure therewith the praise of being a prime poacher. On the other hand the eggs must be sufficiently fresh, or success will be equally impossible. The egg-yolk contains certain organic substances in union with sugar, which are *gelactosides*. Egg lecithin, when extracted by the chemist, has been found to act curatively by its special phosphorus in cases where fresh raw eggs failed to produce any remedial effects. When given medicinally this stimulates the appetite, and leads, as aforesaid, to an increase of weight, constituting an excellent element of food whenever phosphoric treatment is found to be desirable; as in

senile debility, general weakness, phosphatic urine, and similar conditions of exhausted energies, bodily, or mental.

Also "Condensed Egg" is now made by a process of removing the contents from the shell, and evaporating all excess of moisture, then pure sugar is added as a preservative. "There is no mystery," says the *Lancet*, "about this preparation. It consists simply of fresh eggs and refined sugar." Such "Condensed Eggs" are put up in jars hermetically sealed, and being perfectly sterilized, they will keep good for any length of time. No coagulation is caused in the process.

For "Egg-white water," in fever and diarrhœa, diffuse the whites of two eggs through a pint and a half of cold water, sweeten to taste, and add a little cognac, or other liqueur, if deemed advisable. For Egg-lemonade, shake together in a bottle the white of an egg, a tumblerful of cold water, the juice of half a lemon, and a teaspoonful of white sugar.

The Wood-pigeon had called Alice (*in Wonderland*) a serpent, because of her long neck. When questioned further Alice said very truthfully, "I have tasted eggs, certainly, but then little girls eat eggs, quite as much as serpents do, you know." "I don't believe it," said the Wood-pigeon, "but if they do, then they're a kind of serpent! that's all I can say."

Again, "I should like to buy an egg, please," said Alice (*Through the Looking Glass*) timidly to the old Sheep, in the little dark shop. "How do you sell them?" "Fivepence farthing for one, twopence for two," the sheep replied. "Then two are cheaper than one," said Alice in a surprised tone. "Only you *must* eat them both if you buy two," said the Sheep.

Eggs, are, according to Dr. King Chambers, highly nutritious sustenance in fevers, and acute exhausting illnesses, when taken raw, and diluted with water (or milk?), being thus rapidly absorbed; but if delayed within the digestive canal so as to become putrid, the products of their decomposition are peculiarly injurious; the sulphuretted hydrogen and the ammonia evolved are posionous to the intestines. An egg should not be positively boiled, but, so to say, coddled, or put into boiling water, covered over, and allowed to stand (near the hob) for five minutes; at the end of which time it will be well and evenly cooked all through.

Again, for another "Egg Silky," whisk the yolk only, or the whole egg thoroughly, and grate a little nutmeg over it; take a good teaspoonful of sugar, and stir well together; pour in

gradually about half a tumblerful of boiling water, and lastly add from one to two tablespoonfuls of whisky. This is excellent for a catarrhal chill.

The eggs of those birds whose young are hatched without feathers, for example, plovers, exhibit when boiled a translucent albuminous white, which is not opaque like that of the fowl's egg under similar conditions. Moreover, the proportion of yellow yolk in the eggs of wild birds is considerably larger than in those of domesticated ones, adding thereby to the ratio of nutritive elements. But what are usually sold by poulterers as plover's eggs are those of the common lapwing (*Vanellus cristatus*). The Plover (*Charadius*) is thought to have derived its name from the Latin *pluvia*, rain, because of its fondness for being on the wing in rainy weather. Not that every Plover's egg that comes now into the market would have become a Plover in due course if allowed to be hatched out. "All that glitters is not gold," and every nice-looking, dark speckled egg that reposes in a mossy basket, and is sold for ninepence, or a shilling, in the West-end of London, has not owned a Plover for its mother. The dwellers round the Norfolk Broads could, and they would, tell something about these so-called Plover's eggs. "Furriers," said Dr. King Chambers, "are in the habit of passing off tabby cats' skins as Japanese lynx, and hundreds of the best 'Plover's eggs' are laid by gulls on the East coast." Sir Lewis Watson, Baron of Rockingham, when at his newly purchased manor of Wilsford, Lincolnshire (1641), received the following delightful letter from his wife—"'To my loueing husband Sir Lewis Watson, at Wilsford,' "Sweetheart, I thanke you for your Plouar, the which are very great daynties to us indeede—for the sweet sauce which is your kindnes in sending them, and will procure us doctar diet, and doctar meoriman (merryman) at the eating of them. Writing to you so lately I have no more to say now, but that I will pray for your good helth, and remayne, your ever loueing wife, Eleanor Watson. Rockingham, November 23. I have given bearer only 1s."

It is an established fact that patients have been cured of obstinate obstructive jaundice by taking a raw egg on one or more mornings while fasting. Dr. Paris tells us that a specially ardent oil may be extracted from the yolks alone of hard-boiled eggs when roasted piecemeal in a frying pan until this oil begins to exude, and then pressed hard. Old eggs furnish

the oil most abundantly, and it undoubtedly acts as a very useful medicament for indolent liver. The yolk consists in part of a variety of albumin, and therefore coagulates when heated, just as the white does, though in a less degree. But if the dry hard yolk is crushed, and digested in alcohol, it then becomes colourless in itself, whilst the spirit dissolves out a bright yellow oil, which forms about two-thirds of the weight of the yolk in its perfectly dry state. Thus the yolk, like flesh, and fish, is shown to consist of fat intermixed with a substance which closely resembles the gluten of plants.

What is termed a Bombay oyster is almost as delicious as the real bivalve, and is easily made: Into two teaspoonfuls of vinegar, with a pinch of pepper, and salt added thereto, break an egg, keeping its contents whole; add a third teaspoonful of vinegar, and the oyster is complete. Egg shells (particularly when the eggs have been subjected to glasswater for preservation), are found, if given in powder, helpful in cataract of the eyes, whether lenticular, or capsular; this is partly because of the sulphur which is present; likewise any sort of garlic is to be equally commended in such cases for the same reason. Though it may not be a sensible thing (*Epicure*, January, 1902), to teach one's grandmother how to suck eggs, yet it is quite possible to instruct that omniscient old lady how to successfully preserve them; the surest method being to wet-pack them on the day they are laid, thus keeping them damp and fresh.

Custard powders, so called, are sold as a substitute for eggs, but consist as to the majority chiefly of starch, to which a yellow colour is imparted by admixture with some vegetable dye, for instance, turmeric. Their nutritive value is not in any way equal to that of a genuine custard made with yolk of egg. In England it is customary to serve eggs in their shells, and it is considered bad form to extract the contents from the shells broken open at table; but in America this latter method is general, and certainly more convenient to an invalid.

Sir Morell Mackenzie has recorded the striking circumstances which occurred in the family of a distinguished literary man, members of the said family throughout four generations being made seriously ill by eating an egg, or even a small portion of one, whether knowingly, or inadvertently; the fresher the egg, the worse the consequences! At all times eggs laid by fowls fed on garbage, decaying meat, and other such noxious food, are not

fit to be eaten. The hen's egg is a good illustration of the fact that albuminous, or proteid food, is earlier in use for life development than starch foods. The body of the chick is formed (by warmth alone) from the yellow yolk; the white of the egg is almost pure albumin and water; whilst around all is the impenetrable shell, part of which has to be dissolved from within to form the bones. Albumin coagulates at a temperature of fifty-two degrees less than that of boiling water, so that eggs and food dishes made therewith, should be cooked according to this rule; otherwise the albuminous parts will harden on until leathery and indigestible. The albumin of egg yolk is vitelin, which coagulates firmly at a lower temperature than the white, being supposed also to contain some casein.

Eggs fried in fat become inaccessible to the gastric juice within the stomach, and are therefore tardy of digestion; to wit, in the omelette, and the pancake when made without flour, but lemon juice sprinkled over either of these is helpful. An omelette differs from a pancake in not being thin, or browned, and in not being baked on both sides. It does not readily assimilate with sweet principles, except when fine fruit jellies are used instead of jams, or stewed fruit. Omelettes with coarse jams, simulating fine confitures, and savoury omelettes with all the whites of the eggs put into them, are inferior products of culinary skill. Former cookery books up to 1840 prefer the omission of half of the egg whites, because the preponderance of the yolks makes an omelette more tasty, more loose in its substance, and more tender. Indeed, Dr. Kitchener (*Cook's Oracle*) deems this suppression of half the whites so important that without it no omelette can be kept from proving hard. Scrambled or stirred eggs are a kind of spoiled omelette. Mary Smith in her *Complete Housekeeper* (1772) gives an omelette as a "Hamlet," also Sauce Robert, as "Roe-boat Sauce," and Queen's Soup as "Soupe a la Rain." Thackeray when he invited schoolboys to dinner always gave them beefsteak, and an apricot omelette; generally as a prelude before taking them to see a pantomime.

Fresh eggs, if coated by dipping in, or brushing over with water-glass (a dissolved silicate of soda in hot water, called also "mineral lime"), can be preserved almost indefinitely by the hard impenetrable protective glaze which is thus made to surround them. "This water-glass," says the *Lancet*, "is also a powerful antiseptic." Eggs treated thus will preserve their fresh milky

taste for six months, and remain undistinguishable from eggs taken straight out of the nest. Ordinary egg shells, when powdered, are remedial against goitre, or enlarged throat gland, which entails a general deterioration of the whole bodily system, nutritive and structural, (*myxœdema*, as this is called). Mix together three parts of powdered white sugar-candy, one part of finely powdered egg-shells (first dried in the oven), and two parts of burnt sponge. Then let six or eight grains of the mixed powder (kept dry in a well-corked bottle) be taken in a dessert-spoonful of water, or milk, at bedtime for a week together, and every alternate week throughout three months.

ELDERBERRY.

From the well-known purplish-black berries of the Elder (*Sambucus nigra*) is made Elderberry wine, which when combined as to its composition with raisins, sugar, and spices, may well pass for Frontignac; or, if well brewed, and three years old, for English Port. This wine has curative powers of established repute, particularly as a pleasant domestic remedy for promoting perspiration on the access of a catarrh, with shivering, soreness of throat, aching limbs, and general depression: under which conditions a jorum of hot steaming cordial Elderberry wine taken at bedtime proves famously preventive of further ills. "A cup of mulled Elder Wine, served with nutmeg, and sippets of toast, just before going to bed on a cold wintry night, is a thing," as Cobbett said, "to be run for."

Again, the inspissated juice, or "rob," extracted from crushed Elderberries, and simmered with white sugar, is cordial, laxative, and diuretic. One or two tablespoonfuls are to be taken with a tumblerful of very hot water. To make this, five pounds of the fresh berries should be used, with one pound of loaf sugar, and the juice should be evaporated to the thickness of honey. Chemically, the berries furnish viburnic acid, with an odorous oil, combined with malates of potash, and lime. Elder-flower tea is also excellent for inducing free perspiration. "The recent Rob of the Elder, if spread thick upon a slice of bread, and eaten before other dishes, is our wives' domestick medicine, which they use likewise on their infants and children, whose bellies are stopt longer than ordinary: for, this juice is most pleasant, and familiar to children: or, drink a draught of the

wine at your breakfast to loosen the belly" (1760). In Germany the Elder tree is regarded with great respect. "From its leaves a fever-drink is made; from its berries a sour preserve, and a wonder-working electuary; whilst the moon-shaped clusters of its aromatic flowers are narcotic, and are used in baking small cakes." Our English summer is not here until the Elder is fully in flower, and it ends when the berries are ripe. Douglas Jerrold, once at a well-known tavern, ordered a bottle of Port Wine, "which should be old, but not *Elder*."

As a recipe for making Elderberry Wine: "Strip the berries (which must be quite ripe) into a dry jar, and pour two gallons of boiling water over three gallons of the berries, cover, and leave in a warm place for twenty-four hours; then strain, pressing the juice well out. Measure it, and allow three pounds of sugar, half an ounce of ginger, and a quarter of an ounce of cloves to each gallon. Boil slowly for twenty minutes: then strain it into a cask, and ferment it whilst lukewarm. Let it remain until it has become still before bunging, and bottle it in six months. If a weaker wine is preferred, use four gallons of water to the above quantity of berries, and leave for two days before straining. Some stone jars will serve the purpose instead of a cask. Or, in another way, to every three gallons of water allow one peck of Elderberries; to every gallon of juice allow three pounds of sugar, half an ounce of ground ginger, six cloves, one pound of good Turkey raisins; and a quarter of a pint of brandy to every gallon of wine. Then for working the wine, add three or four tablespoonfuls of fresh yeast from the brewery to every nine gallons of the wine." Elderberry juice contains a considerable proportion of the principle necessary for a vigorous fermentation, but it is deficient in sweetness.

German writers declare that the Elder contains within itself an entire magazine of physic, and a complete chest of homely medicaments. Likewise John Evelyn (*Sylva*, 1664), has written concerning the Elder: "If the medicinal properties of its leaves, bark, and berries were fully known, I cannot tell what our countrymen could ail for which he might not fetch a remedy from every hedge, either for sickness, or wounds." And again, "the buds boiled in water-gruel have effected wonders in a fever; the spring buds are excellently wholesome in pottage; and small ale in which Elder flowers have been infused is esteemed by many so salubrious that this is to be had in most of the

eating-houses about town" (1680). The great Boerhaave (1720) always took off his hat through respect when passing an Elder bush. Nevertheless this exhales an unpleasant soporific smell which is said to impair the health of persons sleeping under its shade. "They do make tooth-pickers, and spoons of Elder-wood, to which they attribute much in preservation from the pain of toothache." Curiously enough an old English proverb ran to this effect: "Laurel for a garland, Elder for a disgrace."

Sir Thomas Browne has told among his *Vulgar Errors* (1646), "that Elderberries are poisonous (as we are taught by tradition) experience will unteach us." At the Christmas Party, Dingley Dell, graphically described in *Pickwick*: "Long after the ladies had retired to bed did the hot Elder wine, well qualified with brandy and spice, go round, and round, and round again: and sound was the sleep, and pleasant were the dreams that followed." Formerly the creamy Elder blossoms were beaten up in the batter of flannel cakes, and muffins, to which they gave a more delicate texture. They were also boiled in gruel as a fever-drink, and were added to the posset of the Christening feast. In *Anatomie of the Elder* (1655), it is stated: "the common people keep as a great secret in curing wounds the leaves of the Elder (which they have gathered the last day of April). Likewise make powder of the flowers of Elder gathered on a Midsummer day, being first well dryed, and use a spoonful thereof in a good draught of Borage water, morning and evening, first and last for the space of a month, and it will make you seem young a great while."

From Elder flowers a gently stimulating ointment may be prepared with lard, for dressing burns and scalds; also another such ointment concocted from green Elderberries with camphor and lard, has been formerly ordered by the London College of Surgeons for the relief of piles. Thus "the leaves of Elder boiled soft, with a little linseed oil added thereto, if then laid upon a piece of scarlet, or red cloth, and applied to the piles as hot as this can be suffered, being removed when cold, and replaced by one such cloth after another upon the diseased part, by the space of an hour, and in the end some bound to the place, and the patient put then to bed; this hath not yet failed at the first dressing to cure the disease, but if the patient be dressed twice therewith it must needs cure them if the first fail." "It were likewise profitable for the scabby if they made a sallet of those

young elder-flower buds, which at the beginning of the Spring doe bud forth; as also for those outbreakings of the skin, or pustules, which by the singular favour of nature are contemporaneous; these buds being macerated a little in hot water may be sometimes eaten together with oyle, salt, and vinegar."

The following is a "grandmothers' recipe for Elderberry Syrup." "Stew the berries gently with a little water until all the juice is extracted; then press them through a hair sieve, or squeeze them in a coarse cloth, so as to obtain all the viscid juice. To each pint of this add one pound of preserving sugar, and three (bruised) cloves; then boil it until of a syrupy consistence. Afterwards bottle, and cork well; it will keep for years. When using the syrup take a tablespoonful in a tumblerful of water; boiling water if for a cold, so as to afford relief by prompt perspiration." "Elderberry wine made hot, and into which a little cinnamon is mixed, is one of the best preventives known against the advance of influenza, or the ill effects of a chill." None the less we read in *Cranford*, "Not all the Elder wine that ever was mulled could wash out the remembrance of a domestic difference between Miss Pole, the spinster, and her hostess, Mrs. Forrester, who had protested that ghosts were part of her religion."

ELECAMPANE.

From the times of the Middle Ages, a candied sweetmeat has been employed in Great Britain, as made from our English familiar plant, Elecampane (*Helenium inula*), growing tall, stout, and downy, of the Composite order, from three to five feet high, with broad leaves, and bright yellow flowers. "One of the plants," says William Coles (1656), "whereof England may boast as much as any, for there grows none better in the world than in England, let apothecaries and druggists say what they will." An old Latin distich thus celebrates its virtues: *Enula Campana reddit præcordia sana:* "Elecampane will the spirits sustain." Some fifty years ago its candy was sold commonly in London, made into flat round cakes, composed largely of the medicated sugar, and coloured with cochineal. A piece was eaten each night, and morning, for asthmatical complaints; and it was customary when journeying by river to suck a bit of the same, or of the Elecampane root, against poisonous exhalations, and bad air.

The candy may still be had from our leading confectioners, but scarcely containing, it is to be supposed, any more of the Elecampane than their barley sugar does now-a-days of barley. Chemically the roots, from which this candy is made, include a camphoraceous principle, helenin, and a starch known as "inulin," most sparingly soluble, together with a volatile oil, another resin, albumin, and acetic acid. The inulin is a powerful antiseptic to arrest putrefaction; the helenin relieves chronic bronchitis, and soreness inside the nostrils. Moreover, this latter principle of Elecampane is said to be peculiarly destructive to the bacillus connected with consumptive disease of the lungs. In classic times the poet Horace told how Fundanius made a delicate sauce in which the bitter inula was boiled, and how the Roman stomach when surfeited by an excess of rich viands pined for plain turnips, and the appetising *Enulas acidas* from frugal Campania :—

"Quum rapula plenus
Atque acidas mavult inulas."

Prior to the Norman Conquest, and during the Middle Ages, the root of Elecampane was much employed medicinally in Great Britain. Though now found but infrequently as of local growth in our copses, and meadows, yet it is cultivated in private herb gardens as a culinary, and medicinal plant.

ELECTRIC PHYSICAL EFFECTS.

"KNOW," saith John Swan, (*Speculum Mundi* 1643), "that the horn of a Unicorne hath many sovereigne virtues, and with an admirable dexteritie expelleth poyson, insomuch that being put upon a table furnished with many junkets, and banqueting dishes, it will quickly decrie whether there be any poyson amongst them."

"In short (*Night side of Nature*, Catherine Crowe, as far back as in 1848), "we are the subjects, and so is every thing around us of all manner of subtle, and inexplicable influences; and if our ancestors attached too much importance to these ill understood arcana of the night side of nature, we have attached too little. The sympathetic effects of multitudes on each other, of the young sleeping with the old, of magnetism on plants, and animals, are now acknowledged facts. May not many other asserted phenomena that we yet laugh at, be facts also? though probably too

capricious in their asserted nature, by which I mean depending on laws beyond our comprehension, to be very available? For, I take it, as there is no such thing as chance, all would be certainty if we knew the whole of the conditions."

To paraphrase a letter written by Sydney Smith, December, 1821, from Foston, for Lady Mary Bennett: "Dear Lady, spend all your fortune in an electric lighting apparatus! Better to eat dry bread by the splendour of electric light, than to dine on grouse by gas, or on wild beef with wax candles; and so, good-bye! dear lady."

To wear silken clothing next the skin, will serve to retain a healthful electrical state of the body, thereby promoting cheerfulness of mind under atmospheric surroundings which would otherwise depress.

ENDIVE (*See* SALADS).

FATS.

SOLID neutral fats, such as suet, lard, and spermaceti, also liquid non-volatile oils, such as olive oil, and sperm oil, are classed together as chemical fats. They are composed of carbon, oxygen, and hydrogen, but do not contain any nitrogen. When a fat is treated with an alkali, the fatty acid unites with the alkaline base, making a soap, and glycerine is set free. Fats are distinct from other food elements which increase the weight, and warmth of the body, such as the sugars, starches, and cellulose, these being carbohydrates, which are more affected by heat than the fats; but the latter when cooked, at a high temperature, which is kept up, undergo some disintegration, and a free fatty acid is liberated; this is apt to disagree with delicate stomachs. Meat to be fried should be plunged suddenly into a deep pan of nearly boiling fat, pure olive oil, or dripping, or butter. The intense heat produces an instant coagulation of the proteids (resembling white of egg) on the surface, and forms a protective crust. It is supposed that the greater digestibility of cold fats over hot fats is because the fatty acid then unites again with glycerine to form a neutral fat free from acid on cooling. Carbon enters the body for fuel in fat, starch, and sugar, and quits it as carbonic dioxide. Lean persons who wish to gain fat should eat but little lean meat, whilst taking freely of butter, potatoes, white bread, and plain pastry, if easily digested; they should live in warm well-ventilated rooms, and refrain from much active

out-door exercise. Furthermore there is much truth in the maxim, "to eat little and often will make a man fat."

For contributing fat to lean persons the Banana cure is now popular in America. This consists of eating scarcely anything besides baked Bananas, which not only add weight, but at the same time recruit the nervous energies of body and mind. But those who advocate cooked Bananas are emphatic in condemning them raw as dangerous and unwholesome. Banana flour is found valuable in cases of stomach inflammation, and in typhoid fever, as it can be retained, if suitably prepared, when other forms of the appropriate foods are rejected. Sir Henry Stanley, the famous explorer, wrote concerning this Banana flour, "if only its virtues were publicly known, I cannot doubt that it would be largely consumed in Europe. For infants, persons of feeble digestion, and dyspeptics, the flour, properly prepared, would be in universal demand. During my two attacks of gastritis, a light gruel of such flour mixed with milk, was the only matter that could be digested."—It contains twenty per cent of proteids, and sixty-eight per cent of carbohydrates. The Banana is always pure, and never tainted by grubs: its outer skin protects the fruit entirely from contamination. Experts say that the Banana, like the Medlar, can scarcely be in too ripe a stage for eating. The British Medical Journal (1904), teaches that Bananas should not come to table before their skin has turned black in places, whilst their pulp is at the same time slightly discoloured.

Fish-oils, notably that from the cod's liver, are more easily digested than ordinary fats, but are not so highly organized. The next most readily borne, and assimilated is bacon fat, either hot, as rashers, or of cold boiled bacon, which serves a much better purpose for building up the bodily tissues. Then comes cream, a natural emulsion; likewise butter. For children another capital combination of fat may be supplied by toffee, this being made of sugar, butter, and sometimes a portion of treacle. Butter in such a shape is especially agreeable to the young stomach; and most of the toffee-sugar occurs as "invert," which is particularly easy of digestion.

For lean, or wasted patients one of the simplest means of enriching the diet is by adding to it a certain quantity of rich new milk, two, or three pints a day, besides the ordinary nourishments; also "croutes au coulis," or gravy fingers, afford fat in

a useful and palatable form. "Take several slices of stale bread, choosing them not too much dried up, chop off the crusts, cut the crumb into neat finger lengths, dip them rapidly in, and out of a basin of cold milk, drain them, brush them over with white of egg, and dredge them thickly with flour. Melt three table-spoonfuls of clarified beef-dripping in a small saucepan, and bring it to the boil, lower the fingers separately into this, and cook them until crisp, and brown. Build them up as a small pyramid in the centre of a heated dish, and pour over it a teaspoonful or two of strong beef gravy, or of a flavoured brown sauce."

All children need a liberal allowance of heat-producing food, but most of them have a dislike of fat; therefore they naturally crave for sugar as a substitute. Thus their desire for sweets is the cry of nature for what she wants; and this voice of nature should be obeyed; nevertheless fatty foods are good for prurigo, and other skin troubles of children.

Dr. R. Hutchison, in a recent lecture before the National Health Society of London, "had a good word to say for Margerine as physiologically equal to Butter; than which latter substance there is no food stuff of higher value!" His emphatic opinion is that there is too much starch, and too little fat in the national diet system, and that therefore a stunted race of the working classes is growing up. Dripping used to be given liberally to the children of the poor; bread and dripping was the staple article of their food; but this has now given place to cheap jams, which do not possess the same nutritive value as the said fatty substance, (whereto the homely bloater likewise may be profitably compared), these things being supplemented with lentils, oatmeal, haricot beans, and a certain amount of *animal food*; for it cannot be doubted that together with the carbohydrates, such as starches, sweets, cream, etc., an adequate allowance of nitrogenous nutriment in the form of fresh meat, eggs, casein of cheese, gluten of cereals, and vegetable nitrogens, helps materially to lay on fat; indeed, is essential for the purpose. At the same time a considerable amount of bodily exercise, chiefly out of doors, must indispensably accompany this dietary, unless it is prohibited by a previous wasting of the muscles during some acute disease, with as yet insufficient convalescence.

Dr. Hutchison further says, there is no sort of carbohydrate food more fattening than sugar, because, unlike any other such food, this contains no water, the nourishing value whereof is nil.

Such preparations therefore as the malt extracts can never add to the diet as much fattening and warming support as an equivalent in weight of ordinary cane sugar. Spermaceti, as obtained from the whale, used to be largely given for the purpose of making a thin person fat, but it has now dropped out of use. It was administered in the form of a powder, mixed with sugar, and three-quarters of an ounce could be thus taken daily, being well borne, and not difficult to absorb. Cream contains about 20 per cent of fat, and three tablespoonfuls of it are more than equal in food value to one tablespoonful of cod-liver oil emulsion. Butter has 80 per cent of fat, and can be taken in considerable quantity if mixed with starchy food, such as mashed potato.

As Dr. Hutchison says, "There can be no doubt that mutton-fat, especially when hot, proves irritating to the stomachs of some persons; and in them the eating of mutton pies, or Irish stews, is likely to be followed by bothering indigestion, or even acute catarrh of the stomach."

Sleep of itself seems to lessen the waste of bodily fat. A German writer goes so far as to assert that an extra hour's sleep at night is equivalent to the saving of two and a half pounds of fat in the year. A good homely form of fatty food at breakfast is fried bread. Take slices of brown bread, fry them a nice brown with some dripping (either of mutton, beef, or roast chicken), serve warm with pepper. "You'll find," said the elder Mr. Weller to his son Sam, "that as you gets vider you'll get viser. Vidth and visdom, Sammy, always goes together."

Practically, when it is wished to increase the bodily weight and nutrition by laying on fat only, then the food increment must be made as regards giving fats, and carbohydrates (starches, and sweet things); but where one desires rather to enrich the body as to its muscular tissue, and complement of blood, thereby adding weight as well as vital force, or, in other words, to confer more proteids, then the proportion thereof in the daily food must be augmented; whilst what are termed proteid-sparers, or economisers, are also given, such as gelatin, and the like. This is the plan to be pursued in strengthless, nervous disorders. Lean fresh meat is to be regarded as the type of a natural proteid food. It contains about one-fifth of its weight of that constituent, the rest being made up chiefly of water; the proteids are not only rapidly consumed, but they cause a sympathetic increase in the consumption of sugars and fats; therefore an

animal diet makes for leanness. Where, on the other hand, it is desired to reduce the amount of bodily fat, as in obese persons who are encumbered thereby, it will be proper to reduce the number of fat- and heat-producers in the daily food; also to increase the output of energy as supplied in the food, by taking more exercise, or doing more daily active work, or by a combination of these methods. The richer meats should be used very sparingly, such as pork, and goose; likewise the fatty fish, as salmon, mackerel, eels, herrings, sardines in oil, and sprats; the coarser sorts of bread will be best, such as contain much unassimilable bran. Potatoes are not so fattening as white bread, and may be allowed in moderation. Fresh fruits will be very useful, but not so the dried sweet fruits. Thick soups, sauces, and pastry are fat-producing, likewise starchy farinaceous foods. Lean meat may be taken liberally. Rest and sleep seem to lessen the waste of fat. But sleep is useful as an aid to digestion only in the case of invalids, and aged persons, and even then it may be injurious, because of the depressed circulation meanwhile.

At first, for those newly convalescent from a wasting disease, pounded meat should be added to soups in the form of purées; then passing on to the more easily digested forms of animal food, such as chicken, fish, and eggs. Jellies properly made from lean superior meat are to be commended, likewise custard, and light milk puddings, which are proteid-sparers. The enrichment of the diet in fat for such patients may be wisely deferred until later, being then accomplished, if desirable, by the free use of cream, butter, bacon, and suet.

Warner, in his *Literary Recollections*, tells of an eccentric lady, Mrs. Jefferys, the sister of Wilkes, who lived at Bath, and who dined every day at a boarding-house, with a bottle of Madeira at her side, eating largely of some big joint particularly abundant in fat. She was served with frequent slices of this fat meat, which she swallowed alternately with pieces of chalk, neutralizing, as she supposed, the acids of the fat with the alkaline basis of the chalk. Furthermore she amalgamated, diluted, and assimilated the delicious compound with half a dozen glasses of her Madeira.

Charles Lamb, in *Grace before Meat*, inveighs against overfed, obese greedy eaters. "Gluttony and surfeiting," says he, "are no proper occasions for thanksgiving. We read that when

Jeshurun waxed fat he kicked." "Whenever I see a fat citizen at a feast in his bib and tucker I cannot imagine this to be a surplice." The shrewd worldly old Lord Chesterfield, in one of the noted letters to his son, then at Paris, 1752, for the recovery of his health, gave the advice, "I pray you leave off entirely your heavy greasy pastry, fat creams, and indigestible dumplings; and then you need not confine yourself to white meats, which I do not take to be one jot wholesomer than beef, mutton, and partridge."

M. Brillat Savarin directs (1889), "that lean persons for whom it is sought to correct this disposition should eat plenty of newly-baked bread, taking care to masticate it thoroughly, and not to leave any of the crumb; also to partake of eggs for luncheon at about 11.0 a.m. Then at dinner, potage, meat, and fish, may be had as desired, but to these must be added rice, macaroni, sweet pastries, sweet cream, charlottes, etc. At dessert, savoy biscuits, babas, and other preparations which contain starch, with eggs and sugar. Beer is to be the beverage by preference, or Burgundy, or Claret. Acids are to be avoided, except with the salad, which rejoices the heart. Eat plenty of grapes in the season. Go to bed at about eleven p.m. on ordinary days, and not later than one o'clock in the morning on holiday occasions." Such is the French method for getting fat!

Sydney Smith, who had been trying anti-fat dieting, and lessening his sleep, wrote in 1819 from Saville Row, London, to Lady Mary Bennett, "I shall be so thin when you see me that you may trundle me about like a mop." It should be remembered that the dietetic requirements of old age are just the reverse of those of childhood. The assimilative power of the bodily cells is now on the wane, and the physical activities are restricted, so that less food is required. "Leanness and longevity," it has been remarked, "go together, and a man will only roll all the faster down the hill of life if his figure be rotund." "Discerne," taught Bacon, "of the coming on of yeares, and thinke not to doe the same things still, for age will not be defied."

Charles Dickens, when humorously describing a foot-race between the Boston Bantam, and the Man of Ross (very fat), said of this Roscius, "according to the epigram of some anonymous cove":—

> "And when he walks the streets the paviours cry
> 'God bless you, sir,' and lay their rammers by."

Per contra, Tennyson in his *Vision of Sin* admonishes us solemnly that :—

> " Every face, however full,
> Padded round with flesh and fat,
> Is but modelled on a skull ! "

Edward Fitzgerald, in a letter to his friend Bernard Barton, August, 1844, wrote " I spent four pleasant days with Donne, who looks pale and thin. We are neither of us in what may be called the first dawn of boyhood, but Donne maintains his shape better than I do, for, sorrow, I doubt not, has done this with me ; and so we see why the house of mourning is better than the stalled ox. For, it is a grievous thing to grow poddy : the age of chivalry is gone then."

Few children's rhymes are more common than that which relates to Jack Sprat and his wife ; but it is little known that this has been current for two centuries and more. When Howell published his *Collection of Proverbs* in 1659 it contained the rhyme :—

> " Archdeacon Pratt would eat no fat,
> His wife would eat no lean :
> 'Twixt the archdeacon and his wife
> The meat was ate up clean."

In certain animals, as the ox, sheep, goat, and hart, the fatty tissue about the loins and kidneys is known as suet ; it is harder fat and less fusible than that from other parts of these animals. Fat of the ox, or sheep, when melted out of its connective tissue forms tallow ; the corresponding flaky fat of hogs furnishes leaf-lard. Mutton suet may be purified from its peculiar odour by being heated to 150° Fahrenheit, at which temperature the hircin is decomposed, and the hircic acid passes away. During the siege of Paris some candles made of mutton fat were thus purified, and the fat was then used for food. The South Germans term the brisket-fat, or breast-fat of sheep and oxen, because of its excellent nut-like flavour, " breast-kernel." The hump of the Camel is analogous to it both in structure and in taste.

If the diet of a patient is restricted to milk, and if this is well-borne, it may be made more nourishing as " superfatted milk " by immersing in the milk some suet finely chopped, and enclosed in a muslin bag ; then simmering the whole for a while with moderate heat. To begin with, a good-sized teaspoonful of the suet should be used for a pint of milk, advancing presently to

larger quantities of the suet if the stomach does not rebel. Chopped suet is neither heavy, nor indigestible, if the pudding, or dumpling, or other dish in which it is used be boiled, or steamed, a sufficiently long time, so as to render it light, and easy of digestion. For a plain suet pudding: take one pound of flour, half a pound of chopped suet, and a pinch of salt. Mix all together, with about a quarter of a pint of cold water; then flour a cloth, and put the pudding into it, tie up, and drop it into a saucepanful of boiling water, and boil for two or three hours.

The late Lord Leighton, President of the Royal Academy, who loved everything about him to be beautiful in form, colour, and texture, and who would have wished, it might be naturally supposed, to live almost on ambrosia and nectar, when he was asked what he would specially like for his birthday dinner, could think (as Miss Cockran tells) of no greater delicacy than roast mutton with suet pudding. Tennyson, again, loved beer, and chops. So it does not appear that these gifted men, whose pen and pencil seem to have been inspired, manifested any special nicety of palate, or natural craving for choice culinary dishes.

FENNEL.

THE herb Fennel (*Fœniculum*) of our kitchen gardens is best known to cooks as supplying a tasty, fragrant, spicy material for sauce to be eaten with boiled mackerel. But furthermore:—

> "Above the lowly plants it towers,
> The fennel, with its yellow flowers,
> And in an earlier age than ours
> Was gifted with the wondrous powers
> Lost vision to restore."

A carminative oil is distilled from the Fennel, which is employed in the making of cordials. Shakespeare, in his play of *Henry the Fourth*, tells of "eating conger and Fennel" (two highly stimulating things together) as the act of a libertine. The Garden Fennel is admirably corrective of flatulence. If from two to four drops of its essential oil are taken on a small lump of sugar, or, similarly, if a tea be made of the bruised green herb, and drunk, a small teacupful at a time, any griping of the bowels, with flatulent distension, will be promptly relieved; as likewise the bellyache of infants by reduced quantities of the same tea. Chemically Fennel yields also a fixed fatty principle, some sugar,

and some starch, with a bitter resinous extract. Gerarde has taught that "the green leaves of the Fennel eaten doe fill women's brestes with milk." The camphoraceous vapour of its essential oil will cause the tears, and the saliva to flow. A syrup prepared from the expressed juice of the herb, was formerly given for chronic coughs. The plant was eaten in olden times as a savoury herb. Its leaves are served nowadays with salmon to correct the oily indigestibility thereof. Roman bakers put the herb under their loaves in the oven for giving the bread an agreeable flavour. A physician to the first Emperor of Germany saw a monk cured by his tutor in nine days of a cataract, simply by applying frequently to the eyes a strong decoction of the whole Fennel plant (bruised whilst fresh), in boiling water, and then allowed to become cool. It was formerly the practice to boil Fennel with all fish; and French epicures keep their fresh fish in Fennel-leaves so as to make the flesh firm. The whole herb is thought to confer longevity, strength, and courage; though an old proverb has said, ominously enough, "To sow Fennel is to sow sorrow." Keats, 1817, who was first a student of medicine, and then a poet, has sung: "Fill your baskets high, with Fennel green, and balm, and golden pines." John Evelyn has taught that the peeled stalks, soft, and white, of the cultivated Garden Fennel, when dressed "like salery," exercise a pleasant action conducive to sleep. The Italians eat these blanched stalks, which they call "*Cartucci*," as a salad. Fennel seeds, when macerated in spirit of wine (together with the seeds of Juniper, and Caraway), make a cordial which is noted for promoting a copious flow of urine in dropsy. If the herb is dried, and powdered, a valuable eye-wash can be prepared therefrom, half a teaspoonful being infused in a wineglassful of cold water, and presently strained off clear. A similar application will speedily relieve earache, and toothache, being then first made hot, if desired.

Wm. Coles, in his *Nature's Paradise* (1650), taught that "both the seeds, leaves, and roots of our Garden Fennel are much used in drinks, and broths, for those that are grown fat, to abate their unwieldinesse, and cause them to grow more gaunt, and lank." The ancient Greek name, *Marathron*, of the herb, as derived from the verb *maraino*, to grow thin, seems to have conveyed a similar meaning. Hot Fennel tea, made by pouring boiling water on the bruised seeds, and flowers, is an efficient promoter

of female functions (half a pint of water on a teaspoonful of the bruised seeds.) Also against fleas, some of the seeds if carried in a small muslin bag about the person will be effective.

FIG (Ficus).

Only one kind of Fig comes to ripeness with us in England, so as to be supplied as fresh fruit: the great blue Fig, as large as a Catherine Pear. "It should be grown," said Gerarde, "under a hot wall, and eaten when newly gathered, with bread, pepper, and salt; or it is excellent in tarts." This fruit is soft, easily digested, and corrective of strumous disease. Among the Greeks it formed part of the ordinary Spartan fare; and the Athenians forbade exportation of the best Figs. Informers who betrayed offenders against this restriction were called "*Suko-phantai*," or fig-discoverers, (now sycophants). Bacchus was thought to have derived his vigour, and his corpulency, from eating Figs in abundance, such as the Romans gave to professional wrestlers, and champions, for conferring bodily strength. The dried Figs of the shops afford no idea of the fresh fruit as enjoyed in Italy at breakfast, and which supplies a considerable quantity of grape sugar. In its green state this fruit secretes a milky, acrid juice, which will serve to destroy warts if applied to them externally; such juice becomes afterwards saccharine, and oily.

In England the Fig tree flourishes best on our sea-coasts, because of the salt-laden atmosphere. Near Gosport, and at Worthing, there are orchards of Fig trees. The famous Fig gardens at West Tarring, Worthing, are said to have originated with Thomas a Becket, and one particular tree is still pointed out as having been planted by his own hand. In the local Churchyard there is an epitaph on "the bodie of John Parson, buried March, 1736":—

"Youthe was hys age,
Virginitie hys state,
Learning hys love,
Consumption hys fate."

On the Saturday preceding Palm Sunday, the market at Northampton is abundantly supplied with Figs, and more of the fruit is purchased at this time than throughout the rest of the year. Even charity children are regaled with Figs on the said Sunday

in some parts of the country; whilst in Lancashire Fig pies made of dried Figs, with sugar, and treacle, are eaten in Lent.

Foreign Figs come to us as dried in the oven (the larvæ within them of the cynips insect being thus destroyed), and compressed in small boxes. They consist in this state mainly of mucilage, sugar, and small seeds. As imported from Turkey they contain glucose (a sugar), starch, fat, pectose, gum, albumin, mineral matter, cellulose, and water. They exercise a gentle laxative effect when eaten; also, if split open and applied hot against gum-boils, or other similar suppurative gatherings, they will afford ease, and promote maturation of the abscess. The first Fig-poultice on record was that employed by King Hezekiah 260 years before Christ, as ordered by the Prophet Isaiah, to "take a lump of Figs, and lay it on the boil; and the King recovered." Likewise for glandular enlargements this fruit was of old renowned as a resolvent remedy :—

> "Swine's evil, swellings, kernels,
> Figs by a plaster cure."—(1665).

When eaten raw, the dried Figs are apt to produce a passing soreness inside the mouth. Grocers prepare from the pulp of these foreign dried Figs (mixed, it may be, with honey) a jam known as "Fignine," which is wholesome, and will prevent costiveness if eaten at breakfast with brown bread. Again, the pulp of Turkey Figs is mucilaginous, and acts as a useful pectoral emollient for hard, dry coughs; it may therefore be well added to ptisans for such catarrhal troubles of the air passages. Figs cooked in milk make a good useful drink for costive invalids. Barley water boiled up with dried Figs (first split open), liquorice root, and stoned raisins, forms the "Compound decoction of Barley" prescribed by doctors as an admirable demulcent. In Cornwall raisins are called Figs, and "a thoompin' Figgy puddin'" is popular at Christmas. "Weight for weight," says Dr. Hutchison, "dried Figs are more nourishing than bread, and a pint of milk with six ounces of dried Figs will make a good meal." "Oh, excellent! I love long life better than Figs" (*Antony and Cleopatra*). Fifty years ago at the Hall table of Brasenose College, Oxford, was served "Herodotus pudding," a rich confection of Figs, and their accompaniments; and probably the same is still prepared there at the hands of a classical cook. For Herodotus pudding, "take half a pound

of bread-crumbs, half a pound of good Figs, six ounces of suet, six ounces of moist sugar, half a saltspoonful of salt, three eggs, and nutmeg to taste; mince the suet, and Figs, very finely; add the remaining ingredients, taking care that the eggs are well whisked; beat the mixture for a few minutes, put it into a buttered mould, tie it down with a floured cloth, and boil the pudding for five hours; serve with wine-sauce." To stew Turkey Figs, remove any stalks, or hard pieces from the fruit, prick the skins, and soak them overnight in enough water to cover them; then put them, and the water, into a small stewpan, and simmer very slowly for about twenty minutes. French plums, or prunes, may be stewed in the same way, adding a little sugar if liked. The juices of Figs and Prunes have peptonizing powers which will materially aid the digestion of milk, and cheese.

Certain small birds known as "becca ficas," or Fig-eaters, are to be found plentifully on the Continent, and at times in this country during the summer and autumn, being said by Brillat Savarin "to fill and beautify (when cooked) all the digestive powers." "This bird cannot be eaten, it can only be chewed; and the consommé of choice flavours stored in its roasted carcase has to be sucked out." Such is the advice of the Canon Charcot, as quoted by a renowned physician. For making a Fig pudding, "put three ounces of bread-crumbs in a basin; add Figs cut in small pieces, with a little sugar, or 'log maple sugar,' and a little grated lemon rind; mix with milk (and perhaps a little water); pour into a buttered basin, and steam for three hours." Fig tart is likewise a good old-fashioned dish, and useful as a gentle laxative: "Stew some good Figs in a little syrup sharpened with lemon-juice, and use them when cold, covering with a plain paste, as for an apple, or other fruit tart; or let the syrup boil until thick after the Figs are tender, and are removed from it; cut them in little pieces, and use them with some of the syrup for pies in patty pans, so that when baked they resemble mince-pies; they will suit the elders better than richer compounds containing suet. A small amount of grated apple may be added, with a little spice, and some lemon, or orange rind (candied), also perhaps chopped apple (about one-fourth the weight of the Figs)." An excellent gargle for sore throat may be concocted by boiling two ounces of split Turkey Figs for thirty minutes in half a pint of water, straining this when cool.

Towards assisting the laxative action of stewed Figs, or Prunes, against constipation, it is important to manage a proper position of the body as regards the bowels during sleep at night. Anatomical arrangements are to be borne in mind for this end, as to lying on the proper side at the proper time. Thus, for a while after the meal to lie on the right side is correct, so that the food undergoing digestion may pass presently out of the stomach into the first bowels, and gradually onwards, until after some hours it reaches the ascending colon, which passes up the right side of the abdomen. At this stage to turn over on to the left side will be of service, so that the fæcal mass may slide along the transverse colon across the top of the abdomen into the descending colon, which runs down the left side, and so on into the rectum, or lowest bowel, for evacuation in the morning without any straining, or hindrance. When a relaxed condition of bowels prevails, then just the opposite tactics should be pursued. If Figs, instead of being stewed, as anti-costive, are steeped overnight in cold, soft water, enough to cover them, and perhaps adding a few drops of fresh lemon-juice, they will be found nicer, and more efficacious for the purpose.

The fresh Fig does not fructify in this country, because no special wasps essential for such a function are available here. Caprification, or the fertilizing process, is artificially practised in South Italy for ensuring a good crop of Figs. A wild Fig, or Caprifig, which is inedible, is suspended upon the tree of the edible variety. This Caprifig contains a particular kind of wasp, which eats its way out in search of other Caprifigs wherein it may lay its eggs ; but not finding any such wild Figs, it enters the flower of an edible Fig, taking in with itself some fertilizing pollen. A supply of these wasps is therefore essential to the Fig grower. "Do men gather grapes of thorns, or Figs of thistles ?" is an instructive question propounded in Scripture, which would bear application to the wild Caprifig.

FISH FOODS.

As to the animal characteristics and endowments of Fish, both generally, and particularly, a reference may be made to former writings, whilst we have now to consider specially the therapeutic principles and capabilities of Fish foods regarded as medicinal.

Speaking broadly, the substance of Fish served at table is thought to be lighter of digestion, but less nourishing, than the flesh which we eat as beef, mutton, lamb, veal, and pork. It is credited with the faculty of imparting phosphorus to the brain, and to the nervous organization; it is further believed to be a sexual stimulant, and restorative, but its exclusive protracted use is thought to engender outbreaks of skin disease. Some persons also find Fish, as a food instead of meat, to be a nervine calmative, and to exercise soporific effects. Moreover, the oily fish, such as salmon, mackerel, cod's-liver, herrings, and sprats, when adequately digested, promote fatty development, and bodily warmth. Fish roe is reputed to be a rich source of organic phosphorus; and bone materials, such as phosphates of lime, potash, and soda, are contributed by various fish.

Count Romford concluded that of all foods a red herring has the highest specific sapidity; that is, the greatest amount of flavour in a given weight of insipid food with which it is intermixed. Again, a Connecticut Professor in the State Agricultural College found when investigating the comparative values as food, of meat, and other matters of daily sustenance, that the climax of nutrition is reached in the eminently popular Red Herring. Alphonse Karr tells amusingly in his *Tour round my Garden* of a midnight mass at Lille, where some old women were praying, and preparing a supper called a "reveillon"; "from time to time they drew from under their petticoats a small chafing dish, upon which were cooking two or three herrings; they turned the herrings, put the chafing dish back *in its place.* and resumed their prayers." The bloater is so called because partially smoke-dried (*bloat*, an obsolete term to smoke) after some salting, and is not split open. The fat under the skin of a herring is never of good taste, and is best extracted by broiling. Kippered, or smoked, herrings are frequently dipped instead into pyroligneous acid, which gives them the smoky flavour. "But they furnish," says Dr. Haig, "more than 6 per cent of gouty uric acid." About the year 1600 Robert Greene, the Playwright, fell a victim to a surfeit of pickled herrings, and Rhenish wine, at some merry gathering of his associates. A "Yarmouth Capon" (or fowl), is a bloater, and says old Fuller, "Few Capons save what have more fins than feathers are bred in Yarmouth." Irish herrings are frequently smoked with juniper wood. Father Prout was loud in their praise :—

"Sure! of Dublin bay herrings a keg,
And an egg,
Is enough for all sensible folk!
Success to the fragrant turf-smoke
That curls round the pan on the fire;
While the sweet yellow yolk
From the egg-shell is broke
In the pan,
Who can
If he have but the heart of a man,
Not feel the soft flame of desire
Which inflames e'en the soul of a friar?"

Sydney Smith, writing to Lord Murray, from London, in November, 1843, said: "I shall be obliged to you for the herrings, and tell me at the same time how to dress them; but perhaps I mistake, and they ought to be eaten naked." Mr. Benjamin Bell, a famous surgeon of the last century, supposed the eating of fish to be on the whole a mischievous practice; and Dr. Cheyne, a well-known physician of 1730, entertained similar views. The products of decomposition in fish are rapidly formed, and then act as poisons to the human system; occasionally also living fish elaborate similar toxic substances. The widespread impression that much fish-eating entails a liability to skin diseases, and particularly of stale fish to leprosy, is founded on trustworthy scientific data, and has been confirmed by eminent authorities. One practical outcome of this belief is shown by the abolition of fish from the dietary of the patients in the St. Louis Hospital for Skin Diseases at Paris. "Perhaps, indeed, Gehazi, the grasping and dishonest servant of the Israelitish prophet in the Old Testament, fell a victim in his pursuit of the newly-cured Syrian to his greed of appetite, as well as to his avarice. If he fed while overtaking the chariot of Naaman, on such an unattractive, but eminently portable diet as dried fish, septic in its nature, his punishment was doubly justified. Certain is the fact that while in England the stale Cod, or carelessly pickled Halibut, are no longer consumed as food by the masses, leprosy has vanished from the land; yet in those countries where this enlightened policy is not pursued the fell disease is still rife. It is true, nevertheless, that the man who eats bad dried fish, though not of necessity a leper, is still somewhat of a beast." Two hundred years, or so, ago cases of leprosy, and scurvy, and allied diseases were frequent throughout England; for at that time all sheep, and cattle,

except those reserved for breeding, were killed, and salted down at the beginning of winter; and the meat-eating population had for several months in the year only salted meat. Now, thanks to the cabbages, and turnips, grown in most cottage allotments, and to the winter use of these vegetables on farms, such terrible scorbutic diseases as formerly prevailed are no longer with us. With reference to the theory that leprosy is due in the main to badly-cured, and badly-cooked salt fish, a modern authority holds as an opposite opinion that the leprosy is owing, not to the imperfect curing of the fish, but to the inherent uncleanness of the creature itself. "Fish," says this deponent, "are scavengers, garbage-mongers, and devourers of carrion; and although, thanks to a taste for cabbage, we nowadays avoid leprosy, we still contract lupus from the turbot, epilepsy from the festive whitebait, with tuberculosis from the mackerel, and the filleted sole." It has been supposed that the mackerel was one of the fish forbidden to the Israelites of old under the law "Whatsoever hath not fins and scales, ye may not eat."

The fat of fish comprises a smaller proportion of the compounds of solid fatty acids than does the fat of land animals. It is mainly composed of the glycerides of various unsaturated acids. The fish-liver oils commonly contain certain bile products (which give rise to characteristic reactions in colour with acids, and alkalies). A considerable proportion of unsaponifiable matter, chiefly *cholesterin*, is also a usual constituent thereof. Iodine is sparingly present in fish, but the significance of its occurrence is yet obscure. Salt fish is but slowly dissolved in the stomach, because its fibres have become hardened by the salt. Fish oil for medicinal purposes is obtained principally from the Cod, but also from the Pollock, Turbot, Ling, and Dorse. The milt, or soft roe, is the spermatic organ and its secretion (a sexual stimulant?) of the male fish; whilst the ovarian spawn, or hard roe, is that of the female fish. Hufeland, and others, have found the soft roe of herrings useful against tubercular consumption affecting the windpipe.

Considered widely, a diet comprising frequent fish, always fresh, and of proper quality, plainly cooked, is certainly calmative for excitable persons of vivaciously nervous temperament. Nevertheless, Shakespeare has told of others who :—

> "Making many fish meals,
> Fall into a kind of male green sickness."

Proteid, and fat, are the chief nutritive constituents found in fish, of which the value as a source of energy depends upon the amount of contained fat. Fish further includes a considerable quantity of waste substance in skin, bones, etc. Lean fish are better tolerated by the stomach than the fat ones, and are apparently more easily digested, as a rule, than the same quantity of lean meat. In hot weather, and for sedentary persons, white fish, plainly cooked, is better than meat. Boiled Haddock is very suitable for an invalid, but containing innumerable small bones. Finnan Haddies, cured and dried at Findhorn, near Aberdeen, were originated through a fire in one of the fish-curing houses at Port Lethen, on the North Sea, which fire partly burnt a pile of lightly-salted, freshly-caught Haddock lying on beds of dry kelp. After the flames were extinguished these smoked fish were found to be so delicious to the taste, that from then until now no one at Port Lethen, or the larger fishing village a mile away (Findhorn), has ever cured a Haddock except by smoking it over seaweed.

With respect to fish as specially stimulating the sexual functions, this opinion is open to question, and Dr. Pereira has pointed out the significant fact that maritime populations are not especially prolific. In the time of Elizabeth, on great occasions the stewards of noblemen provided dinner for their lord's guests; beef, and venison for the rich, but salted fish, then known as "Poor John," also apple pies, for the humbler visitors. Beating the rolling-pin on the dresser served as a dinner bell. In the middle ages fish was a luxury obtainable only by the rich, and, except near the coast, it could never have been served in anything like a fresh condition, the consequence being that smaller folk had to subsist on fish imperfectly salted, (particularly during the Lenten Fast), and disastrous effects on the skin followed. Pepys complained: "Notwithstanding my resolution, yet for want of fish, and other victuals, I did eat flesh this Lent." Sir Henry Thompson has advised that as a rule fish should be *roasted* (in a Dutch, or American oven), that is, cooked by radiated heat, so that none of its juices may be dissolved away, and lost. Matthieu Williams commends equally for this purpose the side oven of a kitchen range, or a gas oven, these being practically roasters. He directs that as a matter of course the roasted fish shall be served in the dish wherein it is cooked. Here is a way of dressing a fish to make it taste

excellent, if you are camping out far afield: "Take some nice clean clay, and work it up a little; then, without either scaling, or dressing, plaster your fish (fresh from the water) all over with the clay, about an inch thick, and put him right into the hot ashes. When 'tis done, the clay, and scales will all peel off, and you'll have a dish that would bring to life any starved man if he hadn't been dead more than a week! That's the ordinary way, but if you want an extra touch, cut a hole in the fish, and stick in a piece of salt pork, and a few beech-nuts, or meat of walnuts, or butternuts, and you'll think you are eating a water-angel." Many sorts of fish will break if suddenly immersed, for cooking, in water under agitation by boiling, which misfortune may be prevented by not allowing the water to actually boil at all from beginning to end of the cooking. Otherwise, not only does the breaking disfigure the fish, but it further opens outlets by which the juices escape, and thereby depreciates the flavour, besides sacrificing some of the nutritious albumin. Izaak Walton advised that "lying long in water, and washing the blood out of any fish after they be gutted, abates much of their sweetness. You will find, for example, the Chub being dressed in the blood, and quickly, to be such meat as will recompense your labour, and disabuse your opinion of him; yet the French esteem him so mean as to call him '*Un villain.*'"

Respecting the Pike, it is observed by Gesner that "the jaw-bones, and hearts, and galls of Pikes are very medicinable for several diseases, or to stop blood, to abate fevers, to cure agues, and to be many ways medicinable, and useful for the good of mankind." The practice obtains generally with doctors to advise convalescent patients that they should first resume animal diet after a severe illness by taking a Sole, lightly and plainly cooked. This fish has a very delicate flavour, and is easily digested by an invalid. To stew the same in milk, carefully lift the fillets from a very fresh Sole, then roll each piece of fish, and fasten with white tape; lay the fillets in a perfectly clean stewpan, and cover them with new milk; season with a little salt, and simmer very gently until tender. The salts of potash, and phosphate of lime thus supplied, are highly nutritious mineral constituents, whilst the comparatively small quantity of proteids is an advantage. An easy way to test the freshness of such fish is to press a finger on the flesh, when, if fresh, it will be firm, and elastic, but if it be stale, then an indented impression is made

in the soft flesh. Again, Whiting may be similarly allowed when baked in milk. Take a Whiting, half a pint of milk, half an ounce of fresh butter, and one quarter of an ounce of flour, with salt to taste. Place the fish in a small pie-dish, and pour over it the milk; cover closely, and bake in a slow oven for about twenty minutes; when the flesh leaves the bones readily it is done; then place the fish in a hot dish; knead the butter and flour together in a basin, and add to them the milk in which the fish has been cooked; pour into a saucepan, and boil for five minutes, stirring all the time; serve hot.

Concerning the fried fish of the Jews, their representative modern author of fiction, I. Zangwill, writes: "Fried fish! but *such* fried fish! Only a great poet might sing the praises of the national dish! and the golden age of Hebrew poetry is, alas, over." "Israel is among other nations as the heart is among the limbs," so sang the great Jehuda Haller. "Even thus is the fried fish of Judæa to the fried fish of Christendom, and heathendom!" With the audacity of true culinary genius Jewish fried fish is always served cold; the skin is of a beautiful brown, and the substance firm, and succulent; the very bones thereof are full of marrow, yea, and charged with memories of the happy past. Fried fish binds Judæa more than all the lip professions of unity. Its savour is early known of youth, and the divine flavour endeared by a thousand recollections, entwined with the most sacred associations, draws back the hoary sinner into the paths of piety. It is mayhap on fried fish the Jewish matron grows fat. Moreover, there is "*gefüllite fisch*," a delicious thing in Jewish cookery, or fish stuffed without bones; but fried fish reigns above all in cold unquestioned sovereignty; no other people possesses the recipe. As a poet of the century's commencement has sung:—

> "The Christians are ninnies: they can't fry Dutch plaice;
> Believe me, they can't tell a Carp from a Dace."

Izaak Walton "advised anglers to be patient, and to forbear swearing, lest they be heard of the finny tribe, and catch no fish." Concerning whom Leigh Hunt wrote (1830): "Angling does indeed seem the next thing to dreaming. It dispenses with locomotion, reconciles contradictions, and renders the very countenance null, and void. A friend of ours who is an admirer of Walton was struck, just as we were, with the likeness

of the old angler's face to a fish. It is hard, angular, and of no expression; it seems to have been a thing 'subdued to what it worked in,'—to have become native to the watery element. One might have said to Walton, 'Oh, flesh, flesh, how art thou fishified!' He looked like a Pike dressed in broadcloth instead of butter."

"A pretty kettle of fish" is a familiar phrase as applied to any muddled, or mismanaged concern, the "kettle of fish" being actually a sort of stew well known in Scotland as fish and sauce, generally made from Haddocks. Said Alice (*Through the Looking Glass*):—

"I took a kettle, large and new,
Fit for the deed I had to do;
My heart went hop, my heart went thump,
I filled the kettle at the pump.
Then someone came to me and said,
'The little fishes are in bed.'
I said to him, I said it plain,
'Then you must wake them up again.'"

It is of essential requirement that all fish before being eaten should be raised in temperature somehow (by cooking, for choice) to a degree at which all germs of an animal, or a vegetable nature, which may be within, or upon the fish, shall be killed. This rule must be enforced with regard to fish as rigorously as to veal, and pork, in each case for similar reasons; for it has been proved that several varieties of fish harbour in their flesh the young forms of certain parasites, which, if they escape death by the process of cooking, and are eaten by man, develop within his intestinal tract into the adult form of the parasite, and cause serious illness, with a long-continued disturbance of health. All fish therefore (except some shell-fish) must be cooked for the above reason, as well as to make it palatable, in some way before it will be eatable; and of all modes of cooking, to boil the fish is easiest, and most certain in effect. Whenever sea-water from the open sea is available for boiling fish it should be preferred to water artificially salted, this mode of cooking being known as "*à l'Hollandaise.*" Fish cannot be too fresh for kitchen purposes; the Dutch are as nice about this point at the present day, as the Romans were formerly. According to Seneca, in past times the most fastidious among them would not eat fish unless it were cooked on the same day as that of its being taken, so that, as they expressed it, "there should be still

a taste of the sea." Garum, the fish sauce of the ancient Romans, was made of certain fish, to be eaten with other fish. Pliny states that garum had the flesh of shrimps originally for its basis ("*garos*" being the Greek name for shrimp, and "*garus*" the Latin name). Garum was in truth a combination from various sea-creatures—the shrimp, scomberfish, anchovy, red mullet (with its intestines, and with the roe, soft, and hard).

Bisque soup, made from the Crawfish (*Cancer astacus*), is credited in Paris with wonderful properties as a sexual restorative. The Crayfish, or Crawfish, has been long held in medicinal repute also in England, but chiefly as providing what used to be employed as "Crabs' eyes," consisting mainly of lime, as phosphate, and carbonate. They were given powdered for acid indigestion, and heartburn. The Crawfish is found about banks of rivers, in holes, or under stones, feeding on small molluscs, and larvæ. In the French capital "*le Bouillon d'Ecrevisses*" is esteemed as "*analeptique, anciennement recommendé dans la phthisie pulmonaire, dans le lèpre, et dans les affections du systeme cutané.*" A spirited allusion to this bouillon was made by Meslin de Saint Gelais, Chaplain to Francis the First, of France, in a poetical letter addressed to a lady :—

"Quand on est febricitant
Madame on se trouve en risque,
Et pour un assez longtemps.
De ne jouer a la brisque.
Et de mal diner, partant
De ne point manger de bisque
Si rude, et si facheux risque
Que je bisque en y songeant."

Shrimps, again (or Gravesend sweetmeats), when fried in their shelly coverings, are very delicious; the chitin, or horny material of the outer coat, is thus cooked to crispness; though for this effect the Shrimps must be fried just as they come from the sea, not as they are usually sold by the fishmonger after having been boiled in salted water. "Shrimps," as Robert Lovell supposed (1661), "were held to be good for sick people, and of few excrements, being of the best juyce." These "sea-flies" are caught in great abundance near Margate; the red, or beaked, Shrimp is superior to the brown, or flat-nosed species. In the South Sea Islands live Shrimps, pure, and transparent, are scattered over a salad, have vinegar dashed quickly over them, and, being caught up in a leaf, half-a-dozen of them are

tossed into the mouth. Shrimps are carnivorous feeders, being of repute against consumption, and highly restorative in chicken broth.

The Sole does not keep long, and should be eaten as fresh as possible; when in roe its flesh is insipid. The Lemon Sole is, if not really a different species, at all events inferior in kind. A well-flavoured Sole is the "Sea-partridge."

The Red Mullet, abundant on all Mediterranean coasts, and taken in the English Channel, particularly at Plymouth, is termed by some the "Woodcock of the Sea," as its trail is eaten if properly cooked. When dressed the fish should be only lightly scraped, or not scraped at all; the gills should then be pulled away, and such part of the trail as is connected with them; no other evisceration is required. The name of this fish, *Mullus surmulletus*, is said to be derived from *mullus*, the scarlet sandal, or shoe, worn by the Roman Consuls. Fishermen usually scrape off the scales with their thumb-nails immediately the mullets are caught, else the rich crimson hue invariably fades; then the bared skin becomes brilliantly red. The flesh is white, and remarkably free from fat. The flavour of the fish improves with its size, and small fish deprived of the liver are more or less insipid. The method of cooking them, by rolling in paper to prevent injuring the skin, has been observed for at least two thousand years. The Romans placed enormous value upon the Mullet, paying its weight in gold when unusually large. Sussex boasts an Arundel Mullet, a Chichester Lobster, a Shelsey Cockle, and an Amerly Trout.

Sprats contain a large amount of oily fat, disagreeable in flavour, and quite uneatable; this causes all culinary preparations of the Sprat, except when broiled, to be unattractive, or repulsive; broiling dissipates, or volatilizes, most of the oil. The Sprat (*Encrasicholus*, or bitter-headed) should be decapitated, and deprived of its gall; pickled like the Anchovy it strengthens the stomach; the flesh taken before meat loosens the belly. The true Anchovy was esteemed of old as giving tone to the stomach, restoring appetite, loosening the belly, and good against agues. When these fish are salted, and placed in barrels, a little reddish ochrous earth is added to give them colour, which mineral is dangerous unless well washed off at the time of serving the Anchovies. Sprats are often supplied as sardines; naturalists do not recognize a fish called a sardine. This term merely signifies

a mode of preparation; perhaps Pilchards may be likewise employed. Pepys wrote (August 27th, 1660): "Major Hart come to me, whom I did receive with wine, and Anchovies, which made me so dry that I was ill with them all night, and was fain to have the girl rise and fetch me some drink." Dr. Kitchener tells that the Epicure Quin was superlatively pleased with the Banns of Marriage between delicate Ann Chovy, and good John Dory.

A former Yarmouth historian relates that the Dutch fishermen highly esteem the medicinal qualities of the Herring. An old saying of theirs runs to the effect, "Herrings in the land, the doctor at a stand." The fat beneath the Herring's skin, like that of the Sprat, is never of a good flavour, and ought to be extracted before the fish is eaten; this is best done by broiling the Herring. A century back Herring plasters were much in vogue. Again, a Red Herring when steeped in tar was thought to be a sovereign remedy for a cow which had lost the power of chewing the cud.

Half a century or more ago the labourers in Cornwall dined at noon, for the most part on Pilchards, and potatoes cooked in their jackets. The fish, boiled together with the potatoes, were placed on plates, but the cooked potatoes were cast in a heap on the bare table, each member of the family taking a helping, and peeling their own potatoes. Shipments of the Pilchard (*Clupea pilchardus*), when salted, are sent from Cornwall largely to Italy, for consumption there during Lent. These fish appear in immense numbers on the Cornish coast about the middle of July. They resemble the Herring, but are thicker, and rounder. "Fools are as like husbands as Pilchards are to Herrings." Train oil is expressed from the Pilchard's liver.

"The Perch, or Peurch, is so wholesome," says a German proverb, "that physicians allow him to be eaten by wounded men, or by men in fevers, or by women in child-bed."

The Plaice (*Platepa*) has ruddy spots on its surface, and a small, wry mouth. Tom Hood pretended to be angry with his wife for buying this fish when broken out into red spots; also, writing to a favourite child, he told her that having caught a Plaice spotted red he thought he had "caught the measles."

The Whiting (*Merlangus*), one of the Cod family, has flesh of a pearly whiteness. "And here's a chain of Whitings' eyes for pearls." Whiting soup had at one time a notoriety for

increasing the flow of breast milk with nursing mothers, but Dr. Routh gives very much the preference to Conger Eel soup in this respect. "Do you know why it is called a Whiting?" asked the Gryphon (*Alice in Wonderland*). "I never thought about it," said Alice. "Why, it does the boots and shoes," the Gryphon replied very solemnly. "What are your shoes done with? I mean what makes them so shiny?" Alice looked down at them, and said, "They're done with blacking, I believe." "Boots and shoes under the sea," the Gryphon went on to say in a deep voice, "are done with Whiting; now you know." "And what are they made of?" asked Alice in a tone of great curiosity. "Soles, and Eels," the Gryphon replied. "Any Shrimp could have told you that." "*Merlans mangés ne restent non plus dans l'estomac, que pendus à la ceinture.*"

Cockles, and Winkles, are popular shell-fish in the poorer parts of London, and other cities. As a street scene in a squalid South London district on a dismal winter's Saturday night, at the various itinerant stalls for cheap articles of food, we read how "a pale-faced young woman is poking a Cockle into her year-old baby's mouth with her forefinger, as she tells the merchant that the 'little un tykes to 'em as kindly as 'er dad does.'" On another stall hard by are tiny flat fish which suggest a minimum of nutriment, lying at a respectful distance from more or less fresh, and worn-looking haddocks, the vendor proclaiming the merits of his wares in no modest terms. (Venator, in *The Complete Angler*, has told of those that venture upon the sea, and are there shipwrecked, drowned, and left to feed haddocks.) "As we presently moralize on the pathetic scene, the devoted mother with the infant, who can scarcely have yet digested its Cockle, comes again in sight, stops at a small fruit stall, purchases a very green apple, and, biting off one half, begins to administer the other by easy instalments to the babe, perhaps as an antidote to the fish course. No wonder the chemist's shop over the way does a roaring trade; and the tall-hatted, frock-coated young doctor, standing on his doorstep, looks cheerfully up and down the street awaiting developments." "Turning down a side-street on our homeward journey, we pass a provision shop lit up by rows of flaring gas-jets, and with many cheap dainties exposed outside. The pious proprietor, not content with extolling his butter, eggs, cheese, and bacon on three large announcement boards, devotes a fourth, and still

larger one, to warning all and sundry to prepare themselves betimes for a future state, this board standing in suggestive proximity to a festoon of the highly questionable carcases of tenpenny rabbits."

Mackerel, when a big haul has been made on the coast, finds its way abundantly into the cheap markets on hucksters' stalls for the poor. In former times, because of its perishable nature, it was allowed to be sold on a Sunday. Gay notes, "Ev'n Sundays are prophaned by Mackrell cries." This fish furnishes nearly 3 per cent of xanthin, or uric acid.

> "But flounders, sprats and cucumbers were cry'd,
> And every voice, and every sound were try'd.
> At last the law this hideous din suppprest,
> And ordered that the Sunday should have rest,
> And that no nymph the noisy food should sell
> Except it were new milk, or mackerel.
> Hence mack'rel seem delightful to the eyes,
> Tho' drest with incoherent gooseberries."
>
> *Art of Cookery.*

The Mackerel is from *Maculellus*, spotted, of the Scombridæ, because of their brilliant prismatic coats.

The Turbot (*Psella maxima*) is called after "a top," being also the Water-pheasant (with a flavour of its flesh, like that of the game bird), and the "Cannock fluke." The Greeks and Latins named it "*Rombus*, the lozenge, which beareth justly that figure." It is the largest flat fish of European waters except the halibut. For invalids fond of Lobster, but who may not eat this, a salad thereof may be well imitated by cutting strips of cold boiled Turbot, and colouring them outside with beetroot juice, or by substituting cold Turbot, with pepper, and vinegar. "If you would live long"—says a trite adage—"avoid controversy, lobster salad, and quarrelsome folk."

The Salmon (*Salmo*, king of fish) is red-fleshed, and contains much fat, which is interspersed amongst the muscular fibres, and is accumulated under the skin. This fish is at its best just before spawning; on returning afterwards to the sea it is thin, and wasted. "Daintie, and wholesome is the Salmon," wrote Fuller, "and a double riddle in nature: First, for its invisible feeding, no man alive having ever found any meat in the maw thereof; secondly, for its strange leaping, or flying rather, so that some will have them termed *Salmons*, a saliendo." The fish is not named a Salmon before it attains the age of six years;

in its first year it is called *smolt*, in the second *sprod*, in the third *mort*, in the fourth *fork-tail*, and in the fifth *half-fish*. When Salmon is crimped immediately after its removal from the water its flesh remains more solid, and retains the curd, or the coagulable albumin, which becomes a milky curd after the fish is boiled; but when the fish is kept a few days its flesh undergoes a change whereby the curd disappears; the meat then becomes more tender, and is improved in taste, or, as some enthusiasts declare, oily and balsamic properties are developed which render the flesh nutritious, and invigorating, diuretic, pectoral, and restorative. "By the fishmonger," says *The Art of Cookery*,

> "Crabs, salmon, lobsters are with Fennel spread
> That never touched the herb till they were dead."

Tinned Salmon is a questionable form of food, because at times the can has not remained completely air-tight, or the fish being left, however short a time, within the can after it has been opened, acts on the tin, and poisonous products are formed. Byron has recorded the prevailing notion that in his day Salmon was thought to need serving with a corrective sauce of some kind:—

> "From travellers accustomed from a boy
> To eat their Salmon at the least with Soy."

The Tench (*Tinca vulgaris*), being of a golden yellow colour, was formerly commended, on the doctrine of signatures, for giving to persons with jaundice, and liver obstructions. It was further supposed to have some healing virtue in its touch. Izaak Walton says in his *Compleat Angler*: "The Tench is observed to be a physician to other fish; and it is affirmed that a Pike will neither devour, nor hurt him, because the Pike being sick, or hurt by any accident, is cured by touching the Tench."

FOODS.

With respect to foods of divers sorts, which embody curative virtues whilst served at table by way of customary meals, certain desultory matters will not be out of place here. The only cure for a host of bodily derangements, such as gout, rheumatism, biliousness, and kidney troubles, is a stern attention to the diet, always being mindful that too much food prematurely wears out the digestive energies, and their parent organs, through

imposing an excess of work upon them. By way of a rest, an occasional fast, of varying duration according to the individual powers, is a most excellent thing. Human nature is, moreover, made up of both sentiment, and hunger, so that Thomas Hood was truthful in his epicurean reminiscences when he said :—

> " T'was at Christmas, I think, when I met with Miss Chase,
> Yes ! for Morris had asked me to dine ;
> And I thought I had never beheld such a face,
> Or so noble a turkey, and chine."

As soon as man began to pass from a vegetable to an animal diet

> " O fortunatos nimium sua, si bona norint,
> Agricolas ! " *Virgil's Georgic*. ii. 458.

and to feed on flesh, fowl, and fish, then condiments became necessary, both to render such foods more palatable, and savoury, and also to preserve from intestinal corruption those parts which were not immediately used up. Probably salt was the first seasoning discovered for such a purpose; we read of this in the Book of Leviticus ii. 13, " Every meat-offering shalt thou season with salt." " Certain dyspeptics," as Dr. King Chambers teaches, " get into a bad habit of striking out from their bill of fare henceforward everything that has once seemed to disagree, the result of which policy is an unwholesome monotony of wrongly-chosen victuals, and a despairing resignation to a needless abstinence. Let them, on the other hand, take the more hopeful course of adding to their dietary everything that they have once found to agree, and they will acquire a choice nearly as extensive as their robust brethren could wish. If one cook cannot make a coveted article digestible, let them try another." It is noteworthy that several of the large leading West End Hotels in London now think it worth while to make a special feature of *invalid diet*. The truth is, most persons suffer nowadays from some one or other ailment, gout it may be, or rheumatism, bloodlessness, skin trouble, influenza, neuralgia, diabetes, kidney disorder, or what not, for which persons the regulation meals are quite unsuitable. Perhaps milk only is desired, or prepared cocoa, plain bread, boiled chicken, fish free from grease, and delicate, simple, sugarless, butterless, or acidless puddings. At present everything of such sort which an invalid may want is happily provided at these several Hotels.

Hippocrates said, in an aphorism, that "the younger a human being is, the easier is it starved, until we come to extreme old age, when the powers of life are considered by some physiologists, Celsus among the number, to give way more quickly under famine than those of middle-aged men." Again, a nutritious diet, and a plentiful increase of good constructive food, are indispensable for children, hitherto badly fed, among the poor, who are found to suffer from inflammation of the eyes as to their outer membranes, with some ulceration thereof. To treat such cases medicinally whilst restricting the diet, would be a lamentable mistake. It is also an assured fact that certain physical troubles, such as corns, and enlargements of the toe-joints, with cold feet, each from a gouty condition, will improve under diminished food, the enlargements of the toes become lessened, and the peeling of the outermost skin, by removing the hardened hypertrophied growth, whilst forming a sounder tissue beneath, enables well-fitting shoes, or boots, even smaller than before, to be worn with comfort. Corns, and likewise certain cancerous indurations about the lips, or elsewhere, are actual overgrowths of the outermost skin, and they both arise fundamentally from an excess of certain materials in the blood; considering which we may conclude that to cure these evils we should restrict the diet accordingly. For example, a man, forty-eight years of age, who had lessened his daily food in order to mitigate, or cure, bronchitis, and asthma, combined with rheumatism, (in which endeavour he was altogether successful), became much surprised to find that the corns (hard, and soft) from which he had suffered for many years, altogether disappeared likewise under this code of treatment. Of course, corns are indirectly the effect of pressure from outside by tight, or ill-fitting shoes. But any direct pressure would of itself make the skin thinner, just as pressure tends to wear out a boot-sole; whereas the indirect effect of pressure on living tissues is to thicken them through excessive nutrition; so says Dr. Rabagliati in his *Book of Aphorisms*.

The great Duke of Wellington looked upon physic, and much food, as things equally objectionable, and to be avoided. "All my life," he declared, "I have taken as little medicine as I could; and I have always eaten, and drunk, as little as possible." Saint Francis of Assisi once, when obliged to dine at the sumptuous table of a rich gourmand, instead of eating

the rare meats, sprinkled ashes thereupon, saying as he did it, "Brother ash is good." Nevertheless, nourishing and abundant food is essential for invalids whose nervous system has failed under some prolonged taxation of its endurance, so that impairment of the brain's functions, or painful neuralgia, or sleeplessness has supervened, especially through excess of literary work.

"Tales versus facio quale vinum bibo,
Nihil possum scribere nisi sumpto cibo,
Nihil valet penitus quod jejunus scribo,
Nasonem post calices carmine prœibo."

Confession of Golias (12th century).

Wm. Hazlitt tells in his *Conversation of Authors* (1801): "There was Lamb himself, the most delightful, the most provoking, the most witty, and sensible of men. He always made the best pun, and the best remark in the course of the evening at a meal. No one ever stammered out such fine, piquant, deep, eloquent things in half-a-dozen sentences as he. How often did we cut into the haunch of letters while we discussed the haunch of mutton on the table! How we skimmed the cream of criticism! How we got into the heart of astronomy! How we picked out the marrow of authors! On one occasion he was for making out a list of persons famous in history whom one would wish to see again in the flesh, at the head of whom were Pontius Pilate, Sir Thomas Browne, and Doctor Faustus. With what a gusto would he describe his favourite authors, Donne, and Sir Philip Sidney, calling their most crabbed pages delicious! He tried them on his palate as epicures taste olives, and his observations had a smack in them like roughness on the tongue. To finish this subject, Mrs. Montagu's conversation is as fine-cut as her features, and I like to sit in the room with that sort of coronet face; what she says leaves a flavour like her green tea. Hunt's is like Champagne, and Northcote's like Anchovy sandwiches; Lamb's like Snap-dragon; and my own (if I do not mistake the matter) is not very much unlike a game at nine-pins."

It is quite possible that much of the world's food-supply will be furnished on some future day, not far off, by electricity. Already we know that when powerful electrical discharges occur in air, nitric acid is produced, which, when combined presently with soda, potash, or lime in the soil, produces the nitrates so indispensable for plant life. And it is asserted that by simply

passing a current of definite potential energy through soda-water, a series of products is formed culminating in sugars; oxalic acid is first formed, then tartaric acid, next citric acid, until grape sugar appears.

The paramount importance of phosphatic foods for building up the vital structures of nervous centres, and the main bodily organs, is unquestionable; so that food sources of phosphorus as present in alkaline phosphates are well worth consideration. Those foods which are most rich in phosphoric elements are yolk of egg, fish roe, the germ of wheat, calves' brains, and the thymus gland. Furthermore, phosphates of potash, soda, and other mineral salts are furnished *inter alia* by the cabbage, potatoes, lentils, and new milk. Phosphoric acid occurs with animals, and vegetables, in varying degrees. The phosphorus, whereof we cannot over-rate the importance, is present inorganically, as well as in combination with alkalies, or earths. Dr. King Chambers, however, explains as to certain popular notions with respect to taking phosphorus as of power for specially feeding the brain. He elucidates this matter by telling that "the dogmatic expression of Büchner's—'No thinking without phosphorus'—has gained an unhappy notoriety. If it be held to mean that the amount of phosphorus passing through the nervous system bears a proportion to the intensity of thought, it is simply a mis-statement of facts. A captive lion, tiger, or leopard, or hare, who can have wonderfully little to think about, assimilates, and parts with a greater quantity of phosphorus than a professor of chemistry working hard in his laboratory; while a beaver, who always seems to be contriving something, excretes so little phosphorus, at least in his urine, that chemical analysis cannot detect it. All that the physiologist is justified in stating is that for the mind to energize in a living body, that body must be kept living up to a certain standard, and that for this continuous renewal of life a supply of phosphatic salts is required. The phosphates, indeed, are wanted, but wanted by pinches, whilst water must be pouring in by pailfuls. One might go on thinking for weeks without phosphates, but without water only a few days; and without oxygen a few minutes would terminate the train of self-consciousness. The practical points taught us by physiology are, that for the integrity of thought, the integrity of the nervous system is requisite, and for the integrity of the nervous system, a due

quantity of such food as contains digestible phosphatic salts." Acting on which plain principle, not only foods rich in the phosphates are to be specially commended for invalid conditions, where there is a deficiency of the same, but the phosphatic salts themselves may be superadded in small quantities to the appropriate foods, particularly for children with scrofulous ailments, or rickets. Cerebos Salt, which is now frequently supplied by the grocer as " best salt," is a mixture of four parts of phosphates derived from bran, with ninety-six parts of ordinary table salt ; " but this is " (says Dr. Hutchison) " of doubtful utility, because the phosphates thus present are purely in an inorganic form." Otherwise such phosphates help much to repair defective brain, and nerve structures, whilst promoting the growth of bone in children. If a saltspoonful of Cerebos is stirred in a wineglassful of cold water, it will then form a milky fluid, thus showing that it is something more than common salt. It does not cake in the saltcellar, and may be sprinkled as freely as sifted sugar. For retaining the potash salts in potatoes they must be cooked in their jackets.

FOWL.

The Capon (a cock-chicken fed for the table), " being fat, and not old, is generally for all bodies, and in all respects for wholesomeness of meat, the best of all fowls, for it is easily digested, and acceptable to the stomacke, and maketh much good, firme, and temperate nourishment, almost altogether free from excrement " ; thus quoth Dr. Tobias Venner (1620). " Poultry," declares Brillat Savarin, " is to the sick man who has been floating over an uncertain, and uneasy sea, like the first odour, or sight of land, to the storm-beaten, exhausted mariner." Nevertheless, this same experienced gastronome regards the pullet as being no more to a cook than his canvas is to the painter, which is, of course, to say that a chicken is only a mere vehicle for exploiting the cook's learning, and skill. What is termed by the *chef* a " Spread Eagle," or " *Poulet a la Crapoline,*" is a young, plump chicken split down the back, and flattened, its breastbone being removed, and the bird being seasoned, oiled (or buttered), and grilled, or baked. The breast of a boiled chicken is among the most digestible forms of animal food, but the leg muscles are often tough, and stringy. Moreover, very

fat poultry should be avoided by the dyspeptic, as such fat is particularly apt to become rancid in the stomach.

Chicken broth, if poured on sippets of bread laid at the bottom of the dish in which boiled fowl, or partridge, is served, makes a capital sauce therewith, when the invalid is well enough to be allowed solid food. Some cooks add the feet when making the broth, but these members contribute a peculiar, and not always acceptable flavour. Again, those persons to whom cost is an object, may make a very good broth of fowls' heads, ends of pinions, and feet alone, these being obtained cheap from any poulterer. Fowls' liver soup ("*Potage à la Camerani*") was at one time prepared according to a secret method known only to Grimod de la Reyniere, and his compeers. Thus the fable arose that its concoction in 1806 cost three louis d'or for each person who partook of it at dinner. To standard broth, just before it is done, are added fowls' livers, one for each person, finely minced, whilst the tureen should contain some ready-boiled macaroni, and Parmesan cheese. According to certain French enthusiasts "a single spoonful of this liver soup will lap the palate in Elysium; and while one drop thereof remains on the tongue, each other sense continues eclipsed by a voluptuous thrilling of the lingual nerves." Verily it might be quoted of the said boastful "cordon bleu," in the words of Ingoldsby :—

> "He seemed by his talk,
> And the airs he assumed, to be 'cock of the walk.'"

The right wing of a fowl, having the liver tucked into it, is preferred by epicures. "Mr. Pumblechook" (Dickens, in *Great Expectations*) "helped me to the liver-wing, and to the best slice of tongue." Lord Tennyson declared that the only advantage he got from being Poet Laureate, was that he invariably had given him the liver-wing of a chicken at luncheon. Venetia Anastasia, the wife of Sir Kenelm Digby (1650), was remarkable for her extraordinary beauty; and he was so proud of her that to preserve her health he kept her supplied with the flesh of capons fed on vipers. In order to retain her lovely complexion he was continually inventing new cosmetics for her use; and it is suspected that this too great love for her was the cause of her death, for one morning she was found dead in her bed, at the early age of thirty-three.

An English officer in India not long ago set before his guests

at dinner with great success, and satisfaction all round, a turkey stuffed with the strong-flavoured gum-asafœtida, known to druggists as having a powerful odour, and a persistent taste of garlic (with anti-spasmodic medicinal effects). It is the concrete juice from the roots of several large umbelliferous plants belonging to the genus *Ferula*, having a bitter, acrid taste, whilst consisting of resin, gum, and an essential oil which contains phosphorus, and sulphur. In Persia, and Afghanistan, this sap is collected also as a culinary condiment to be employed by the Indian cook, but in such infinitesimal quantities as to suggest rather than to convey the actual flavour. With curry, and rice, it is found to be delicious when skilfully combined. A Royal Academician who was noted among his friends for making an exquisite salad, always passed asafœtida over the bowl. John Evelyn makes reference to this "fœtid asa" as highly prized at classic Delphi: "Nor are some of our modern skilful cooks ignorant of how to condite it, with the applause of those who are unaware of the secret." Pureira tells of a noted *gourmet*, who assured him that "the finest relish which a beefsteak can possess may be communicated to it by rubbing the gridiron on which the steak is to be cooked with asafœtida." The gum in moderate quantity acts on all parts of the body as a wholesome stimulant, enlivening the spirits, and at the same time improving the vision; it quickens the appetite, and invigorates the digestion, particularly in persons of a cold, languid temperament.

The late Archbishop Magee was once asked, or rather volunteered the reply, that "the two things which tired him most in his clerical administrative consecrations, were the hymn, 'The Church's One Foundation,' and cold chicken for lunch afterwards." As compared with lean beef, which contains eighty-six grains of proteid food in an ounce, the flesh of the common fowl contains eighty grains.

In cases of wasting, bloodlessness, and great prostration of strength, the fresh blood of animals, such as fowls, mixed with warm wine, or milk, punch, warm lemonade, or coffee, and taken immediately, or before its coagulation ensues, proves highly useful. It relieves extreme weakness (as in a case of flooding), restores the bodily warmth, and circulation, acting better, and more promptly, it is said, than transfusion of human blood from vein to vein. The fresh blood of two or three chickens should be given thus in twenty-four hours, according

to the authoritative advice of a leading medical text-book. But in refutation of this advice, Dr. R. Hutchison now enters his protest as follows: "Blood is a dilute fluid in animals, and man, having in every 100 parts from 78 to 82 of water. It is not of itself the food of the tissues to which it is circulated in the body, but merely the vehicle by means of which nourishment is carried from the intestines to the places where it is required in the body. One might as well expect a spoon to be of nutritive value because it conveys food from the plate to the mouth." Two French experimenters found that fresh blood when administered to dogs, even in the liberal allowance of two pounds daily, did not suffice to maintain the life of the animals for more than a month. Blood, in fact, from a chemical point of view, is not so much thicker than water after all; in its solids there is plenty of proteid (primary food), but the other nutritive constituents needed to sustain life, as fat, and sugar, starch, and glucose, are only in quite an inappreciable amount. Furthermore, the red colouring matter (hæmoglobin) which makes up the larger part of the proteid, is a substance which is very far from being completely absorbed. Thus it happens that though blood may be used dietetically without much harm, yet at the same time it will be without much benefit, as given in black puddings, and similar culinary preparations; this being true also of the use of animal blood for the sick as a source of iron.

Importance should be attached to the proper and wholesome feeding of fowls which are served for the invalid. They are affected healthfully, or otherwise, as to their quality of flesh, by the care exercised in feeding them, and the character of the fodder which is supplied to them. Recently a French experimentalist kept some domestic fowls in cages, exclusively on hashed meat (previously stripped of sinew, and fat), with as much water as they liked to drink. At first this diet seemed to suit well enough; but after some time (in from three to five months) the fowls began to show positive signs of gout; their legs became weak, and their gait uncertain; their joints were seen to be manifestly swollen, whilst on some days the birds remained lying down, and would not take any food. Attacks of this nature became more and more frequent, and finally the fowls grew thin, and died. Deposits of urates were found around the joints, as well as in the sheaths of the tendons; likewise some

in the kidneys. A doctor in Paris ascertained that the administration to a hen of any medicament results in a similarly doctored egg, and he recommends the faculty of physicians to make a practical use of this discovery. It has naturally elicited scornfully humorous comment :—

"In dealing with the modern egg
Please pause e'er you begin it.
Inspect it carefully, I beg,
There's something nauseous in it.
Be wary, scrutinize it well,
Lest nasty drugs be present.
There's castor oil within the shell,
Or things still more unpleasant."

It is noteworthy that the giblets of poultry exercise certain solvent properties on other foods, particularly by the gizzard, which in fowls secretes their gastric juice, whilst its lining membrane will coagulate milk, just as rennet does from the calf. Giblets as a combination include the gizzard, head, neck, heart, joints, and pinions of poultry, principally of geese, turkeys, and ducks. From the dried, and powdered lining of the fowl's gizzard, is prepared "ingluvin," a pepsin of specific use against the sickness of pregnant women, especially if taken shortly before food.

Various culinary methods of preparing poultry for the sick are detailed in *Kitchen Physic*, which it would be tedious to repeat. As a specially suitable dish for the convalescent before proceeding to red meat, boiled fowl, and chicken mould, are to be commended. For the former, put the chicken to boil for one and a quarter hours with just enough cold water to cover it; season with salt, and four or five sliced onions (unless forbidden), a bunch of herbs, and about a dozen peppercorns; simmer gently until tender; then make use of the liquor, boiling it down to the required quantity, with the onions in it for flavouring. For chicken mould, take a large chicken, one quart of cold water, pepper, and salt; skin the chicken, and put it into a saucepan with the water, and boil it the usual time; take it out, and cut pieces from the breast, and legs; put back the bones, etc., into the saucepan, and boil till the water is reduced to a pint; strain it, and add to the liquor the pieces of chicken cut off, minced finely, and pepper and salt to taste; let it stand until cold, and jellied, then turn it out.

The "Poule d'Inde," or fowl of India, cock, or hen, is our Turkey (*Meleagris*), the bubbly jock of Scotland, which originally came from America, having been first found wild there, and nowhere else. Turkeys do not hail from Turkey any more than Turkey corn, which also came first from America. In Paris this fowl has become known as a *dindon*, or "poulet d'Inde," though quite on an equal misconception of its origin. "When young," said Robert Lovell (1661), "it recovereth strength, nourisheth plentifully, kindleth lust, and agreeth with every temper, and complexion, except too hot, and troubled with rheumes, and gouts." "The flesh," wrote Dr. Salmon (1695), "is most excellent food, and of great nourishment; you may concoct broth, ale, or jelly of it against consumptions, for it restoreth strength plentifully, and agrees with all dispositions." Young Turkeys will not fatten unless they have free access to pebbles, many of which are found in their gizzards. This lordly fowl began to appear as a Christmas dish about 1585. "Turkeys, hops, and carp" were introduced into England during the reign of Henry the Eighth. After the middle ages Turkeys were practically extinct in Europe; they were imported again in 1432 by a French trader who was master of the Mint, and director of Artillery in the service of Charles the Seventh of France. The story is told of a gourmand who, when recovering from an illness, was allowed by his doctor, in writing, as a simple dinner, "*Une cuisse de poulet.*" But scarcely had the doctor taken his departure when the patient caught up the prescribed menu-card, and, cleverly imitating the physician's hand, added "*d'Inde*" after *poulet*. This order being duly carried out by the cook, the patient regaled himself on a big meal, and a laugh at the doctor's expense. The Turkey Cock goes by the popular names Gobble Cock, and Gobbler. Said Sam Weller (*Pickwick*) when getting into some trouble, "I'm pretty tough! that's vun consolation, as the wery old Turkey remarked ven the farmer said he wos afeer'd he should have to kill him for the London market." Alexis Soyer, the noted London *chef*, at the time of the Crimean War, invented a hundred-guinea dish, for producing which a hundred Turkeys had to be slaughtered, each of which furnished only the two dark pieces of solid flesh from the hips, called by the French "*le sot l'y laisse.*" Meleager, after whom the Turkey is named, was a king of Macedonia.

FROG.

As is well known, Frogs are esteemed for the table in France, their thighs being chiefly eaten there, though in Germany the other muscular parts are similarly used. Even amongst ourselves, an edible Frog is found about Cambridgeshire, and Norfolk, which is of admirable nourishing use. The flesh is mainly gelatinous, and closely resembles that of delicate white chicken. Fried with tomatoes, or mushrooms, and bacon, these English Frogs are simply delicious; so says the *Tramps' Handbook* (1902). It is to an historical dish of Frogs served to Madame Volta, we owe the important discovery of voltaic electricity. The creatures yield a bland broth rich in *mucin*, and when cooked, together with edible snails, they afford a mucilaginous and gelatinous potage, which greatly comforts raw, sore, denuded lining surfaces of the mouth, and throat, serving to restore the lost protective covering of which these parts have become morbidly deprived. For such broth, hay saffron is the orthodox condiment, and colouring addition. The edible Frog is olive-green in appearance, with yellow stripes on its back; there is no valid reason why we should regard it with aversion, as it lives on insects, and slugs, varied with vegetable matters, just in the same way as many birds, animals, and fishes which we are quite willing to consume. Frog-farming in Canada is made quite a profitable business; no fewer than 5,000 pounds in weight of Frogs' legs prepared for table use, was the output of one Ontarian farm alone during last season, and still the demand exceeds the supply.

Frog pies were introduced into England from Italy by Thomas Coryate, (*Furcifer*)—(*see Coryate's Crudities*, 1602). "I did eate fried Frogges in this citie, which is a dish much used in many cities of Italy." They were highly esteemed in London from James the First's time till the death of Charles the Second. If fricasseed in white wine, the Frog has been long found more delicate than chicken, and an easily digested dish.

> "Muse, sing the man that did to Paris go,
> That he might taste their soups, and mushrooms know.
> Oh! how would Homer praise their dancing dogs,
> Their fetid cheese, and fricassee of frogs."

Dr. Hutchison pronounces to-day that the *Rana esculenta*, or edible Frog, is readily digested, and of a delicate flavour. The

hind legs are taken, skinned, and the claws twisted together, in which form they resemble appetizing little lamb cutlets. "It is absolutely impossible," says a French gourmet, "to bring on an indigestion by Frogs, no matter what quantity you eat." The edible portions should first be thrown into plenty of fresh cold water to blanch; next they should be drained, and dried; then put to soak awhile in white of eggs (well beaten up); now powder them over with flour, and finally fry them in plenty of fine olive oil until they are crisp as "the Whitebait of the Minister, that treasure of the sea," and until the bones have become changed into something so rich and strange, that they melt in the mouth. Add a lemon, red pepper, brown bread, and butter, to complete the "loaves and fishes" illusion, and say if a "*fricasee de grenouilles*" be not much easier to eat than to pronounce, and a species of "small deer" by no means to be abandoned to poor Tom. You can devil them, too, if you like, and they make a tip-top curry, or they fry well in batter, or you may stew them in butter, and white wine, with parsley, and garlic enough to swear by, chopped up fine. But no matter how they be cooked, they are very pretty eating, and make a delicious entrée, more tender than the youngest chicken, and still with a flavour, and a velvety texture all their own. The Frog which is eaten lives chiefly on insects, so that really for the table it is considerably cleaner than the pig. There is a painful French proverb, "*Il n'y a pas de grenouille qui ne trouve son crapaud*," and it has a dreadful double-edged explanation. It means "there is no girl so ugly that she cannot find a more repulsive husband." We have rhymed this saying in a much prettier way, as "Froggy would a wooing go," when "a lily-white duck came and gobbled him up; etc." But ugly, or not, Froggy eats well, as we shall all probably acknowledge some day. In seeking for Frogs the French peasants often meet with toads, which they do not reject, but prepare them in a similar manner. As for the rest of the Frog's body (besides the legs), and the skin, so sticky, and slimy, what is done therewith? Why, they make turtle-soup of the same! Yes, the savoury *mock turtle* over which gourmands lick their lips, has for its chief foundation the amphibians which haunt the marshes and fields of Luxembourg.

In *Kitchen Physic* we have explicitly told how the flesh of Frogs is good against coughs, and such as are hectick. Broths made therefrom are restorative, and anti-scorbutic, being prescribed

by continental physicians for pulmonary consumption, skin affections, and other maladies. Frog oil has been extracted by some of our leading chemists, and used externally against cancer. The ancient heraldic device of the Parisians was three Frogs, (or toads), and their city was Lutetia (the land of mud). As becomes a true Hohenzollern, the present Kaiser always wears the talismanic ring of his ancestors. It is a quaint old ring set with a stone of no intrinsic value, the legend connected therewith relating how a toad hopped into the room of the wife of Elector John of Brandenberg, and deposited this stone on her bed. The toad then mysteriously disappeared, but the pebble was zealously treasured among the Hohenzollern Archives. The father of Frederick the Great had it mounted in a ring, which has ever since then been worn by the Head of the House as a mediæval Mascot. On May 12th, Anno Domini 1827, Samuel Pickwick, Esq., G.C.M.P.C. (General Chairman, and Member of the Pickwick Club), communicated a paper (received by the Association with feelings of unmingled satisfaction, and unqualified approval) entitled, "Speculations on the Sources of the Hampstead Ponds, with some observations on the Theory of Tittlebats."

FRUITS.

"No part of the diet in any season is so healthful, so natural, and so agreeable to the stomach as good and well-ripened fruits." Thus Sir Wm. Temple taught (*About Beautiful Gardens*, 1685). "I can say it for myself at least, and all my friends, that the season of summer fruits is ever the season of health with us, which I reckon from the beginning of June to the end of September; and for all sicknesses of the stomach (from which most others are judged to proceed) I do not think that any who are like me (who am most subject to them) shall complain whenever they eat thirty or forty cherries before meals, or the like proportion of strawberries, white figs, soft peaches, or grapes perfectly ripe. Now whoever will make sure to eat good fruit must do it out of a garden of his own; so that for all things out of a garden, either of salads, or fruits, a poor man will eat better that has one of his own, than a rich man that has none. The best fruit that is bought has no more of the master's care than how to raise the greatest gains; his business is to have as much

fruit as he can upon a few trees, whereas the way to have it excellent is to have but little on many trees."

"Health is preserved" (*Treatise on Fruit-trees*, 1653) "by wholesome meats, and drinks, all the yeare from the garden of fruit trees. These dishes, and drinks from orchard fruits are both alimentall, and physicall; they cure disease, and preserve health. Now the garden of fruit trees is profitable to the body for long life, first by the bodily organs, secondly by the affections of the minde; the sweet perfumes of fruits work immediately upon the spirits for their refreshing; such healthfull ayres are speciall preservatives to health, and are therefore much to be prized." The flavour fruits are chiefly eaten for the sake of their agreeable tastes, but they are also of service by reason of the vegetable salts of potash which they furnish. The food fruits contain a large proportion of special sugar which gives them a high nutritive value. This sugar is lævulose, and better suited to delicate, or gouty digestions than dextrose (or cane-sugar). It may be utilized even by diabetic invalids without detriment, being given in such fruits as apples, green gooseberries, cherries, and green currants, before the sugar is fully matured therein. Or, this "lævulose" can be obtained as a sugar from certain grocers, being a white crystalline article, of which two ounces may be safely, and profitably used with the daily food. The value of fruits as food does not lie in their nutritious constituents nearly so much as in their mineral salts, and in their fruit acids, which are of essential benefit to the health, and the blood. These acids, as already shown, exist in union with alkalies, and render uric acid (gouty, if in excess) soluble. The organic acids of fruits (citric, tartaric, malic, etc.) exist mainly in combination with alkalies, but in such a manner that no chemistry can form their counterpart; we may give to a patient for scurvy citrate of potash as a drug (just such a chemical salt as exists in lemons, and oranges) somewhat successfully, but with nothing of results as compared with those obtained by giving the said fresh fruits, rich in natural citrate of potash. And it is the same with the other acids found combined with an alkaline base, such as malic, and tartaric, in grapes, apples, pears, peaches, and apricots. Bananas, peaches, and prunes are among the least acid fruits. The organic acids combined with their basic earths in fruits improve the quality of the blood, whilst acting as anti-scorbutics, laxatives, and diuretics, increasing the movements of the bowels,

and the flow of urine. But all persons cannot eat fruit with impunity. For instance, a case is on record of a patient who could not take a single strawberry without incurring great numbness in both legs; and another of a lady in whom the eating of ripe, uncooked fruit would provoke asthma. Skin eruptions likewise sometimes ensue after any such indulgence. Pepys tells a humorous incident about "our parson, Mr. Mills, on Lord's-day, April 17th, 1664, making a remarkable mistake when reading the morning service; instead of saying 'We beseech thee to preserve to our use the kindly fruits of the earth.'" he prayed, 'Preserve to our use our Gracious Queen Katherine.'" Oranges, again, prove disturbing to the liver, and biliary functions of some persons; and with others the skin becomes troubled by an eruptive outbreak if one or another sort of certain fruits is indulged in.

The various uses of fruits in relieving diseased conditions of the body have been summarised as follows: Under the category of laxatives we may place oranges, figs, tamarinds, prunes, apples, mulberries, dates, nectarines, and plums; pomegranates, cranberries, blackberries, jewberries, raspberries, barberries, quinces, pears, wild cherries, and medlars are astringent fruits; grapes, peaches, strawberries, whortleberries, prickly pears, black currants, and melon seeds are provocative of urine; gooseberries, red and white currants, pumpkins, and melons are cooling fruits; whilst lemons, limes, and apples, again, are sedatives to the stomach. For the modern treatment of chronic dysentery the value of certain kinds of fresh fruit has come to be recognized in medical practice. Of these fruits may be specified apples, strawberries, fresh figs, and tomatoes, all of which are seed fruits as distinguished from stone fruits; it is essential that they shall be absolutely sound, and in good condition. Dr. Lacy, of Guernsey, has successfully practised this treatment for many years, and recently it has come into use by other physicians for chronic dysentery, and diarrhœa, with most happy results. Professor Sheridan has lately reported to the Linnæan Society his conclusions from experiments to ascertain the digestive qualities of various fruits, such as the fig, pineapple, melon, banana, apple, orange, also the vegetable marrow, cucumber, lettuce, dandelion, etc. He has found that the enzyme, or ferment, contained in the juices of these plants will exercise the property of peptonizing the higher proteids, and

is also proteolytic. With the apple, and the orange, their peel is particularly sensitive in this respect, whilst the pulp is less so. Those fruits which we do not peel before they are eaten should certainly be thoroughly washed first, as it is impossible to say what dirty places they may have been in since gathered, or what unclean hands they may have passed through; and sundry diseases can be conveyed by contaminated fruit.

Speaking broadly, we eat fruits more for the sake of their flavours, and sweetness, than for the actual nourishment which they afford. Of the various sorts, apples, apricots, bananas, dates, figs, grapes, plums, prunes, raisins, strawberries, and raspberries are best supplied with substantial proteid; whilst the fattening, and warming principles are chiefly found in the dried sweet fruits containing lævulose, and vegetable gums; cranberries being the most acid fruit. The mineral constituents are chiefly salts of potash, united with the acids (citric, malic, and tartaric), which give a pleasant flavour, but do not cause sour digestion. When converted by the heat of the blood into foods, the acids are burnt off into carbon, and the alkaline bases remain to circulate. Moreover, as fruits ripen the acids diminish to some extent. Cooking renders fruit more digestible, by softening the cellulose, and by converting the gums into a gelatinous form; but a great loss is sustained unless the fruit-juice is eaten with the fruit (stewed for preference), and then it proves of service against constipation, or inactivity of the liver. Uncooked fruits should be warmed for easier digestion by weakly persons. As to taking cane sugar with fruit, if gouty acids, as urates, are already in the blood of those who live freely, or indulge in alcohol, and if these acids are ready to cause fermentation within the digestive organs, such fruits will start this fermentation anew, and further gouty salts will accrue; but if by judicious abstinence the blood is set free from urates, and they be not provoked again, then cane sugar may be taken with impunity as a welcome addition to fresh fruits (though their more exquisite flavours will be masked thereby).

Compotes are fresh fruits stewed with sugar. First make a syrup of three and a half cups of sugar, and two and a half cups of water, and boil for five minutes from the time of its beginning to boil; when it is boiling drop the fruit in carefully, a few pieces at a time, so that it shall not break; cook until tender, but firm enough to keep their shape; remove with a

skimmer, and arrange daintily on a dish; then boil down the syrup until thick. and pour it over the fruit; let this cool before serving. Apples, pears, peaches, apricots, and oranges may all be cooked in this wholesome way. Charles Lamb, in his early story (a sweet, homely, pathetic pastoral), of *Rosamund Gray*, draws the moral: "Shall the good housewife take such pains in pickling, and preserving her garden fruits, her walnuts, her apricots, and quinces: and is there not much *spiritual housewifery* in treasuring up our mind's best fruits—our heart's meditations in its most favoured moments?" "Eating strawberries out of season," said Washington "invariably produces mental depression. I do not believe there would be so many suicides (more frequent in the spring than at any other time of the year) if people would not eat strawberries until they are ripe at home." The use of fruit will materially help to diminish a craving for alcohol. Lord Chesterfield, in one of his celebrated letters to his son Philip Stanhope, when in Italy (1749), wrote: "Fruit when full ripe is very wholesome, but then it must be within certain bounds as to quantity, for I have known many of my countrymen die of bloody fluxes by indulging in too great a quantity of fruit in those countries where from the goodness, and the ripeness of it, they thought it could do them no harm." Scientists now find that cherries, strawberries, and some other fruits tend to lessen the quantity of uric acid in gouty subjects by the action of their *quinic acid*, or "China saure."

Fruit soups are to be commended as agreeable, and useful; they can be made by boiling fresh, or dried fruits in water (with or without the addition of sugar, lemon-peel, etc.), and then freeing them from the solid residue by pressing, and straining off. These soups are pleasant to some persons as drinks, being sustaining, because they will contain quite a small amount of albuminates, rather more carbohydrates, and certain of the organic acids. Apples stewed with raisins make an excellent dish for overcoming constipation: Pare, core, and cut into quarters a dozen, or more, of medium-sized apples; clean thoroughly as many raisins of good quality as equal in weight one-fourth of the apples employed, and pour over these raisins one quart of boiling water; then let them steep until well swollen; stone them, and add the apples, proceeding to cook them until tender. Some sugar to sweeten may be added if desired, although scarcely needed

unless the apples are very tart. Dried apples soaked overnight may be stewed with raisins in the same way for about forty minutes. As already noted (page 51), apples from which the juices have been artificially evaporated, and then used independently, are sometimes sold in the shops as dried apple-rings, or *snitz*. These "snitz" are bleached with sulphur to prevent them from turning brown.

An old recipe of 1754 by the Duke of Bolton's *chef* ordered: "For making *blackcaps*, take a dozen good pippins, cut each of them into halves, and remove the cores; then place them on a right mazarine dish with their skins on, the cut sides downwards; put to them a very little water, and scrape on them some loaf sugar; put them in a hot oven till the skins are burnt black, and your apples tender; serve them on plates, strewed over with sugar." To make a simple apple-water, as an excellent fever-drink, "slice up thinly three or four good apples, without peeling them; boil these in a clean saucepan with a quart of water, and a little sugar, until the slices of apple are soft; the apple-water must then be strained through a piece of clean muslin into a jug, where it should be left until cold. For apple-jelly, "take some cooking apples, and cut them in quarters, but without paring, or coring them; put them to boil, one quart of water to every pound of fruit; when they are boiled to a pulp, strain through a sieve, or bag; then to every pint of juice put one pound of sugar, and boil till it jellies, stirring all the time."

Her late Majesty Queen Victoria, when leaving Baden Baden, after a sojourn there in 1876, brought with her a noted Apple-cake, and the recipe for making it, "*Æpfel kuchen mit Rahm Güss.*" The kitchen there boasted an excellent cook named Marie, and it was she who first made this capital cake for our late Queen. Marie has since then gone over to the great majority, but her excellent Apple-cake lives on. "Line a round baking-sheet which has been buttered, with a paste (not made too thick) composed with one pound of sifted flour, half a pound of fresh butter, six hard-boiled yolks of eggs (having passed the same through a fine wire sieve), six raw yolks of eggs, half a pound of castor sugar, some ground cinnamon, a little ground cloves, and a few tablespoonfuls of cream; mix thoroughly and roll out thinly; the paste should be of the colour of cocoa. In lining the baking-sheet, bring the pastry slightly above the

edge. Wash, and pick equal quantities of currants, and sultanas; peel some Wellington apples, and cut them into quarters, which are to be cut again into the thinnest possible slices, so as to well cover the base of the paste with these slices of apples, and with the currants, and sultanas. Now place three-quarters of a pound of castor sugar in a basin, and work well into this nine yolks of eggs, and whip the whites. Mix in lightly half a pound of finely-sifted flour, adding a little ground cinnamon, putting in the whipped whites last. Fill up the paste containing the apples, currants, and sultanas with this mixture, and bake in a moderate oven, being very careful that the bottom paste is well cooked. When the cake is done, sprinkle it over with fine cinnamon-sugar, cut it out in pieces, and serve cold in a napkin."

Pears are a colder fruit than apples, having an astringent quality, with an earthy substance in their composition. Their cellular tissue contains minute stony concretions which make the fruit in most of its varieties bite short, and crisp. Pears owe their special taste to an amylacetate; they also contain malic acid, pectose, gum, sugar, albumin, mineral matter, cellulose, and water. When peeled they constipate, but with their skins on they are somewhat laxative. Lemery told about Pears (1675): "They create an appetite, and do fortify the stomach; those that be of a sour and harsh taste are more binding than the others, and fitter to stop a looseness." Perry is a fermented drink brewed from the juice of Pears; it is described by Gerarde as "a wine made of the juice of Pears, called in English, Perry, which purgeth those that are not accustomed to take thereof, especially when it is new. Notwithstanding, it is a wholesome drink (being taken in small quantities) as wine; it comforteth, and warmeth the stomacke, and causeth good digestion." The Barland Pear, which was chiefly cultivated in the seventeenth century, still retains its health, and vigour; the identical trees in Herefordshire which then supplied excellent liquor, continuing to do so in this, the twentieth century. During Henry the Eighth's reign a "Warden" Pear ("wearden," because long-keeping) was commonly grown in orchards. Evelyn, in his *Pomona*, says: "Pears are nourishing, especially the baked Wardens, edulcorated with sugar, and are exceedingly restorative in consumptions; the Perry being a great cordial." The chemical *gout* of Pears can be artificially imitated in the laboratory, and an essence made thus is used for flavouring

Pear-drops, and other sweetmeats; the said *acetate-amyl* essence being got as an ether from vinegar, and potato oil. Perry owns about 1 per cent of alcohol over cider, and a slightly larger proportion of malic acid, so that it is somewhat more stimulating, and better calculated to produce the healthful effects of vegetable acids in the body. Pears were deemed by the Romans an antidote to poisonous fungi; and for this reason (which subsequent experience has confirmed) Perry is still reckoned the best thing to be taken after partaking freely of mushrooms. A time-worn maxim directs that after eating Pears wine must be drunk as a corrective, or else mischief may ensue: "*Apres le poire ou le vin, ou le prêtre.*" When Jersey Pears, or other such superior fruit, are gathered in the autumn, being fully grown, they are then woody, and acid, and unfit for food; but by being stored for one, two, or three months they become lusciously tender, and sweet; the woody fibre is converted by fermentation into sugar (as happens with ensilage), and the harsh acids are neutralized, the air having been excluded by the thick rind, whilst the fibre is closely packed. A crop of small Pears grown in Switzerland, which ripen in September, is made into the wholesome "Birnen-bonig," as found on every hotel breakfast table. "Pear puddings" were fashioned in Shakespeare's day, but not containing any Pears; they consisted of cold chicken chopped up with sugar, currants, and spices, being moulded into shapes like Pears. The statesman Hume, when at St. Stephens, never purchased food from the kitchen there, but took thither with him a pocketful of Pears as refreshment. The Pear tree loves a sunny house-front, some sweet old-fashioned country mansion with ancient gables, where the fruit may be reached through the lattice.

The remedial constituent principles of other fruits available for curative purposes may be stated in brief thus: Much acid (citric, and malic) which is astringent, and helpful against sluggishness of the liver, as in the Cranberry, belonging to the Bilberry tribe. This is a small fruit, brilliantly red in colour when ripe; it makes a delightful jam, with a keen flavour, somewhat bitter, and useful as a tonic. There is likewise an aromatic acid in the Medlar (*Mespilus germanica*) whilst passing into the early stages of decay; but this fruit when first gathered is hard, harsh, and uneatable. In Shakespeare's *As you like it* occurs the passage, "You'll be rotten ere you be half ripe;

and that's the right virtue of the Medlar." "This fruit," says Culpeper, "is old Saturn's, and very retentive." The small stones found within the Medlar, when dried, and powdered, will help to dissolve gravel in the kidneys, or bladder. Again, the Currants (*Ribes*), black, red, and white, by their fresh juices exercise salutary actions; these juices are anti-putrescent, containing citric, and malic acids. Both red, and white Currants give help in most forms of obstinate visceral obstruction, and they correct impurities in the blood. The Black Currant, by its viscid, sweet, aromatic juice (thickened over the fire), makes a "robb" of capital use for relieving a sore throat, or quinsy. This old-fashioned "robb," or "rob," is an inspissated fruit juice (of ripe fruit) mixed with honey, or sugar, to the consistence of a conserve, and is to be preferred before the berries themselves. White Currants are the most simple in kind, and the Red are a step in advance. In northern Counties the Red Currant is known as Wineberry, or Garnetberry, from its rich ruddy colour, and transparency. When made into a jelly with sugar (aided by the chemical "pectin" of the fruit) the juice of Red Currants acts as an anti-putrescent, being therefore taken at table with venison, or hare, and other "high" meats. The sweetened juice is a favourite drink in Paris, being preferred there to *Orgeat* (a syrup of almonds). Both the Red and the Black Currants afford a useful home-made wine. "*Ex eo optimum vinum fieri potest, non deterius vinis vetioribus viteis,*" wrote Haller in 1750. The White Currants yield a wine which is still superior, and which becomes improved by keeping, even for twenty years. Dr. Thornton says: "I have used old wine of White Currants for calculous affections, and it has surpassed all expectation." The Black Currant is often named by our peasantry "Quinsyberry"; its jelly (for a sore throat) should not be made with too much sugar, else the medicinal virtues will be impaired.

From the Blackthorn of our hedgerows is gathered in the autumn an oval blue-black fruit, the Sloe, harsh, and sour of taste, but presently mellowed, and covered with a fine purple bloom. The juice of this fruit whilst unripe is highly astringent, and is a popular remedy for stopping a flow of blood from the nose. The ripe fruit yields a dark ruby juice which, when bottled with sugar, and kept for some time, is an excellent astringent cordial. Our cultivated Plums are descendants of the Sloe,

being most varied in form, and character. When ripe they are cooling, and slightly laxative, especially the French fruit, which is dried, and bottled for dessert. The garden fruit contains less sugar than cherries, but a large quantity of gelatinizing pectose. Unripe Plums will provoke severe diarrhœa.

From France has come the *Green Gage*, having been brought to England from the Monastery of La Grande Chartreuse about the middle of the eighteenth century by the Reverend John Gage, of Hengrave Hall, Suffolk, and hence was derived its name. Culpeper said: "All Plumbs are under Venus, and are like women—some better, some worse." Mr. Walter Shandy, the father of Tristram (Sterne), "when having to take his wife to London for her lying-in, was sadly vexed, more by the provoking time of the year than by everything else, this being towards the end of September, when his wall-fruit, and Green Gages especially, (in which he was very curious), were just ready for pulling! Had he been whistled up to London in any other month of the whole year, he should not have said three words about it." There are also the Golden Gage, and the Transparent Gage, each of these being sweet, luscious, and preventive of gout by their fruit acids, which become alkaline presently in the blood. It should have been stated above that Red Currant jelly, being antiseptic, will, if applied externally immediately after a burn, ease the pain, and prevent inflammation, or the formation of blisters.

Again, the Gooseberry (*Ribes grossularia*) contains citric acid, pectose, sugar, and mineral matters; the pectose under heat making a capital jelly of this fruit. The juice was said of old to "cure all inflammations"; it is sub-acid when the Gooseberries are green, and is corrective of putrescent foods, such as mackerel, or goose. The French name for Gooseberry sauce is "*à l'Anglaise; aux groseilles à Maquereux.*" From the Red Gooseberry may be prepared an excellent light jelly, which is of service to sedentary, plethoric, and bilious subjects. The Yellow Gooseberry is richer, and more vinous of taste, suiting admirably for Gooseberry wine. "Gooseberry fool" consists of the unripe green fruit *foulé* (crushed, or beaten up), with cream, or milk. In Devon the rustics call Gooseberries "Deberries," and in Sussex they are familiarly known as "Goosegogs." The Scotch name this fruit when ripe "Honey-blobs." In Ramsay's *Scottish Life and Character*, we read:

"He saw out of the coach window a woman selling the sweet Yellow Gooseberries, and he cried, 'Gie me a haporth o' Honey-blobs.'"

Wild Sloes yield, if made into *Sloe-gin*, certain soluble phosphates which are of specific benefit for bloodlessness, and brain-fag. This is a celebrated Devonshire liqueur prepared from the Blackthorn, and Juniper fruits, and of value for its restorative, sustaining principles.

Some reference must be made to other fruits useful for curative purposes by reason of their medicinal constituents—the Mulberry, Prune, Peach, Quince, Raspberry, and Tamarind.

Mulberries (*Morus nigra*) are grown commonly in the orchard, or paddock, or gardens, where this well-known, rich, syrupy fruit ripens in September. The juice, boiled with sugar, is admirable for curing sore throats, especially of the putrid sort, when used in gargles; also for thrush in the mouth; and the ripe fruit is gently laxative. Mulberries are particularly wholesome for gouty, or rheumatic persons, because their sweet juice does not undergo acetous fermentation in the stomach. This juice contains malic, and citric acids, with glucose, pectin, and gum. In France Mulberries are served at the beginning of a meal. The fruit, with its abundant luscious juice, of regal hue, is used in Devonshire for mixing with cider during fermentation, giving to the drink a pleasant taste, and a deep red colour. Mulberries are remarkable for their large quantity of fruit sugar, being excelled in this respect only by the fig, the grape, and the cherry. In the City of Naples, during the summer, fruit-sellers come in betimes in the morning from the suburbs. The red Mulberries are brought first, very early, with a layer of snow upon them to keep them fresh, and cool; they are carried in by women, and are eaten at the beginning of breakfast (snow and fruit together). Later in the day white Mulberries are brought in by boys. The bargains are struck by gestures, in that wonderfully expressive language of signs which can replace speech altogether, and which invariably accompanies it, in rapid pantomime, hands, head, eyes, and every part of the body emphasizing the spoken words; thus has it been from early Roman days. When perfectly ripe, Mulberries somewhat relax the belly, but when unripe (particularly if dried) they will "bind exceedingly, and are therefore given to such as have lasks, and fluxes." A pleasant home-made wine can be brewed from ripe

Mulberries. "Alice" (in *Through the Looking Glass*) "found herself singing the old catch of children as they dance round, hand-in-hand, in a circle, '*Here we go round the Mulberry bush*,' which certainly *was* funny."

The Bilberry, Whortleberry, Trackleberry, Blackheart, or Whinberry, grows abundantly in our heathy, and mountainous districts, as a small, branched shrub bearing globular wax-like flowers, and black berries, which are covered when quite fresh with a grey bloom. The Bilberry (*Vaccinium myrtillus*) is a capital astringent, and from it can be made a useful domestic cordial as such. If some good brandy be poured over two handfuls of the bruised fruit in a bottle, this will form an extract which will continually improve by being kept. Obstinate diarrhœa may be remedied by giving doses of a tablespoonful of such extract, with a wineglassful of warm water, every two hours whilst needed, even for severe dysenteric diarrhœa. The berries contain chemically much tannin. An extract of Bilberries, when brushed on skin surfaces affected by eczema, and other such diseased conditions, being afterwards covered over with cotton-wool, will signally relieve. Bilberry pudding is one of the things to be commended for consumptive, or scrofulous patients. Together with the Bilberries, some of the moorland air from whence they come seems to be also swallowed; and perhaps reminiscences arise of the sweet fresh breeze, and the short, pleasant grass of the Bilberry hills, and then it's "Oh, who would o'er the downs so free?" Why, the consumptive, and delicate people, to be sure! "Make a crust as light as you can; grease a basin, and line it with the crust; half fill it with well-picked Bilberries; strew two tablespoonfuls of sugar over them, and continue to fill in fruit until the basin is well filled up, and heaped; next put on the crust, flour a cloth, tie it over, and boil for two hours." The Irish call them "Frawms." Lowell, in *Fireside Travels*, tells that the greater part of what is now Cambridge Port, U.S.A., was at one time a "Huckleberry pasture." As already notified, against the intestinal bacilli of typhoid fever the fruit of the Bilberry shrub affords a specific remedy, because the small, sweet, blackish, purple berries are highly antifermentative, freeing the stools from putridity, and the bowels from flatulence. It has been shown experimentally that the typhoid bacillus becomes destroyed by Bilberry juice, and prevented from recurrent growth,

of which there is otherwise a risk, leading to a relapse. This juice gives relief against intestinal colic, besides being admirable when applied to a sore tongue, as well as for burns. It contains fruit sugar, malic acid, limonic acid, a pigment, tannin, and pectins. The typhoid bacillus becomes killed within twelve hours.

Certain fruits are largely imported from countries where they abound more plentifully than with ourselves, as canned, or tinned fruits, excellent in quality when preserved air-tight. However, if a can of apricots, cherries, peaches, or other fruit be opened, seeing that each of these several fruits is acidulous, then, unless the contents are immediately turned out upon an earthenware plate, or into a dish made of earthenware, or glass, the action of the acid combining with the surrounding air will begin to engender a deadly metallic poison. If the fruit is allowed to stand for some time in the opened tin, or metal can, then the work of poison goes on. Fresh fruits in hermetically-sealed cans, if properly prepared, and kept air-tight, do not generate any poison. For a similar reason lemonade, or other extemporized sustaining drinks which are acidulous, should never be made in a tin bucket, nor allowed to stand in a vessel of tin.

Jams, and Preserves, consist of fruits conserved in a strong solution of sugar. The fruit acids, aided by the high temperature employed in the course of preparation, bring about the conversion of a considerable part of the cane sugar into what is termed the "invert" form, *i.e.*, a mixture of dextrin, and lævulose, such as may be made by boiling cane sugar with acids. "Almost half the weight of any jam is made up of sugar in one form or another." Few persons realize now-a-days how many of the good old-fashioned preserves were had recourse to formerly in times of sickness. Black Currant jam, for instance, was almost a specific, and in those days every housewife kept by her a store thereof for needs of illness. Elder flowers, again, were used for making a drink invaluable for colds, and bronchial troubles. In short, with the well-stocked herb garden the variety of dainty remedies which could be produced was almost infinite. Said the White Queen to Alice (in *Through the Looking Glass*), "I'll take you with pleasure as my lady's-maid: twopence a week, and jam every other day." Alice replied, "I don't care for jam: I don't want any to-day, at any rate." "You couldn't have it if you did want it," said the Queen; "the rule is jam

to-morrow, and jam yesterday, but never jam to-day." "It *must* come to jam to-day," Alice objected. "No, it can't," said the Queen; "it's jam every other day; to-day isn't any other day, you know."

GAME.

Speaking collectively, "Game" signifies creatures taken in the chase; with us it includes Venison (of the Deer), Grouse, Hare, Partridge, Pheasant, Snipe, and Woodcock. The flesh of such "game" is finer in texture than that of butcher's meat, and does not so soon become putrid. When a domestic animal is placed under the same conditions as a wild one its flesh in the course of time assumes the closer texture, and other characteristics of game, as seen by the instance of Welsh Mountain mutton. If sent to table shortly after being killed these creatures of the chase are tough, and insipid; but when game is allowed to hang for some time in a whole condition there takes place the gradual creation of a chemical acid by fermentation in the flesh, which becomes strongly acid; also the muscular tissues grow tender, and after some time traces of hydrogen sulphides are liberated. The characteristic flavours of the game are in direct proportion to the amount of these sulphides, or mercaptans, thus set free, but not to putrefactive compounds. Such birds as Partridge, Plover, Snipe, Pheasant, Woodcock, and the like are particularly appropriate food for the sick, partly as dainties, but more especially by reason of the nutrient properties which they contain. They are remarkably rich in mineral salts, especially the phosphates, which are so much needed when the system has become exhausted by disease. Birds which feed mainly on grains, such as the Partridge, and the Pheasant, will keep a long while in cold weather; but birds with dark flesh, living chiefly on animal food, quickly undergo decay. Game of white meat should be done well in cooking; that with dark flesh should be rare. The dangerous microbes which are at first associated with decomposition of game, are presently succeeded by other microbes which are harmless. Therefore if game be eaten at its preliminary stage of putrefaction it may produce serious ill effects; whilst these do not ensue after partaking of game kept longer until tender, and succulent. According to Julius Cæsar (*Scaliger*), the Partridge came originally from Mount Olympus, and has always

preserved the proud consciousness of his divine origin. *Par excellence* the grey English Partridge is the best for eating, there being also a red-legged variety which has culinary excellence. "The young birds that are taken even as they be readie to fly, and are afterwards fattened, prove the best, for they make a pure, and excellent nourishment; they are only hurtful to countrymen, because they breed in them the asthmatick passion, which is a short, and painful fetching of breath: by reason whereof these will not be able to undergoe their usuall labours. Wherefore when they shall chance to meet with a covie of young partridges, they were much better to bestow them upon such for whom they are convenient, than to adventure (notwithstanding their strong stomackes) the eating of them, seeing that there is in their flesh such a hidden and perilous antipathie unto their bodies." Says Mr. George Saintsbury, in *Fur and Feather Series*, "my private conviction is that the best thing you can do with a Partridge, provided he be an honest grey Partridge of British nationality (and the only one which a true gourmand would ever admit to his table), is to roast him in front of the fire, and serve him hot; furthermore to eat what is left cold of him next morning for breakfast, with no other condiment but salt, and a little cayenne pepper. For a plain roast the English grey Partridge, young, and plump, has no rival, and can be put to no better use than roasted plain, being served with such accompaniments as you may please of bread sauce, brown bread crumbs, or fried potatoes." Partridge with celery sauce is helpful in cookery for invalids; again, Partridge pudding is a capital dish, thoroughly English; it is thought to have been invented by the South Saxons, having its origin in the region of Ashdown Forest. "Phick, draw, and singe a brace of well-hung partridges. Cut them into neat joints, and if they are not very young take off the skin first." Line a quart pudding basin with a good suet crust, half an inch thick, and in trimming it off leave an inch above the edge. Lay a thin slice of rump steak at the bottom of the pudding, then put in the pieces of partridge: season with pepper and salt; and pour over them a quarter of a pint of good brown gravy. Roll out the cover, lay it on the pudding, moisten the edge, and press over it the inch that was left round the rim. Wring a pudding-cloth out of hot water, flour it well and tie it securely over the pudding, then plunge this into boiling water and keep it fast boiling all the time it is on the fire. As soon as it is taken off, cut a small round out of

the top to let the steam escape. Like all other meat puddings it is much better if served in the dish in which it has been cooked. A few fresh mushrooms will (as some think) improve the pudding. Game, when "high" (also fish), will emit if in a dark cellar luminous phosphorescence, acting on which fact an Austrian scientist has constructed a lamp consisting of luminous bacilli, or microbes, in gelatine.

"When, they tell me, food decays,
It emits quite dazzling rays,
And a lobster in your room
If it's ripe, dispels the gloom.

"Legs of mutton somewhat high,
Shine like diamonds in the sky.
Further than a lamp, it seems,
Gorgonzola sheds its beams.

"Gas has had its little day,
Microbe light has come to stay.
Shortly we shall see each street
Lit by tins of potted meat."

The Exquimaux bury the flesh of animals killed for food until it is putrid (so it is said, but would not the earth deodorise, and keep it sweet ?); and the Zulus, whose synonym for heaven is, according to Dr. Colenso, "Maggot's meat," follow suit. "Of course," adds Dr. K. Chambers, "rather than die of starvation, or be reduced to the straits suffered by King Hezekiah's army, one would acquire such a habit, and invent a sauce to make it tolerable: but it is not worth while to do this in civilised society."

A few words may well be said here with regard to the food preservatives of the present day, which are used (in some cases much to the detriment of the consumer's health), for preventing game, fish, meat, milk, and other perishable foods from betraying staleness, or putridity, when kept too long on hand, because still unsold whilst yet wholesome, and proper for eating. It should be generally known that most of these preservatives are poisonous if employed on provisions for the kitchen to any extent. And certainly it is high time that some supervision of our meats, and drinks, in this respect should be adequately entrusted to the competent cook, or the doctor, for the public safety and protection; because of a fully enlightened knowledge on their parts of the risks incurred, and the injuries inflicted by such mischievous mal-practices, concerning the dangerous results of which the legislature is at length becoming actively cognisant. In former

times it was the custom, we are told, about Italy and Venice to employ a *scalco*, who had the honour and life of his master in his hands; his life, because it was then not uncommon to put poison into the food of enemies in politics, or rivals in love: so that the cook held in those days a most important, and vital position, when great persons lived in constant fear of being done to death by poisoned meals. Equally important is it now-a-days that an authorised inspection of perishable food-commodities shall be the duty of competent disinterested officials, whenever they may think proper, for the welfare, and safety of a community.

For boiled partridge, or pigeon, "Clean, and season the bird: enclose it in a puff paste, and boil. Serve in its own gravy, supplemented by the liver rubbed up with some stock: and do not forget the bread-sauce. To make this latter, take the crumbs of a French roll, of water half a pint, black pepper six to eight corns, a small piece of onion, and salt to taste. Boil all smooth, then add a piece of butter about as big as a walnut, and mix for use. It is good hot with hot birds, cold with cold birds, and is an excellent food for the sick." Likewise, roast partridge, with sauerkraut (fermented cabbage), is declared by some to be the perfection of game food.

Our English Partridge was pronounced in the new London Dispensatory, "Excellent food for a weak stomach: its liver dried and drunk helps the epilepsie; its marrow and brain cure the jaundice; its gall is one of the most eminent things for defects of the eyes in the world, helping suffusions, and dimness of sight; its broth is of use against the French venereal disease."

The Pheasant, originally from the banks of the Grecian river Phasis, is nowhere met with in a wild state, but requires the continued assistance of man for its preservation, and breeding. This bird has the faculty, when properly matured for cooking, or, as the French say, when properly *mortified*, of proving tender, short, and easily digested: for which reasons it is liked by aged, and delicate persons.

"The pheasant," tells Brillat Savarin, "is a riddle of which the solution is revealed only to adepts! Every substance has its apogee of excellence, which the pheasant attains only when it begins to decompose. This state it does not reach in less than three days after its death, requiring sometimes several more. If eaten within three days it has no distinguishing flavour. Just

when it begins to decompose, the aroma develops, and is the result of an oil which needs a little fermentation to bring out its perfume, just as the oil of coffee is obtained only by roasting. The bird should not be plucked till such a moment, and then larded carefully with the freshest and firmest bacon. When the proper time for this has arrived it will be indicated by a slight odour, and by a change of colour in the breast of the bird. It is a matter of importance not to pluck the pheasant too soon. Experience has shown that birds kept in the feather are much more highly flavoured than those which have been plucked, and then hung for some time; whether it be that contact of the flesh with the air neutralises some portion of the aroma, or that a part of the juices which nourish the feathers becomes absorbed by the flesh. When the bird has been duly prepared it must be properly stuffed. Then cut a slice of bread four inches longer than the pheasant, and toast it. Next take the liver and entrails, grind them up with two big truffles, in anchovy, with a little chopped bacon, and a suitably-sized piece of good fresh butter. Spread this equally on the toast, and place the pheasant in the middle. When it is sufficiently cooked serve it on the toast, surrounding it there with bitter oranges; and be tranquil as to the result. These highly-flavoured dishes should be accompanied preferably with a first-class Burgundy." "A pheasant prepared after the above fashion is worthy of being set before angels, if they are still travelling about the earth as in the time of Lot." "For sweetnesse and pleasantnesse of taste the pheasant excelleth all other fowle: verily for goodness, and pleasantnesse of flesh it may of all sylvestriall fowle well challenge the first place at tables, for it giveth a most perfect and temperate nourishment to them that be healthy. And to the weak, sickly, or that be upon a recovery unto health, there is not so profitable a flesh, for it is very delightsome to a weak stomache; and quickly by reason of the pure and restorative nourishment which it giveth it repaireth weake, and feeble strengths." Thus declared "Tobias Venner (1620), doctor of physicke, at Bathe in the Spring and Fall; and at other times in the Burrough of North Petherton, neare to the ancient hauen towne of Bridgwater in Somerset."

Sydney Smith (1836) wrote: "If there is a pure and elevated pleasure in this world, it is that of roast pheasant, and bread sauce; but, "*Mangé trop frais* (writes M. Sausanne), *sa chair est fade, et moins delicat que celle du poulet.*" There was a certain

Duke of Rutland, who would never allow a Leicester *partridge* to be dressed for his table, since, as he said, "partridges are worth nothing in a grass district." But the same may be told much more emphatically about pheasants: bred between the maggots, and the buckwheat, these birds may run to bulk, but they lose in flavour, and wholesomeness of flesh. "Per contra," pheasants from the Welsh woods, and their natural succulent shrubberies, are unimpeachable. The merits of a well roasted pheasant with browned bread crumbs, and potato chips, or surrounded with bitter oranges, are to be enthusiastically extolled. Again, a plump, young hen pheasant boiled with unbroken skin, and bedded on celery, whilst served with celery sauce, containing the faintest dash of lemon, is a "dish for the gods." "But I'll have no pheasant, cock, or hen," exclaims the shepherd, in the *Winter's Tale.* According to Lemery (1674), "the use of the pheasant (which is a wholesome bird) prevails against epilepsies and convulsions." French cooks make the bodies of pheasants into pies, whilst the plumage is profitably sold.

Game should not be too fat, because in cooking, the oily, yellow, fatty tissues become rank; being less digestible than other animal fats, they leave a reproachful flavour for some time after the meal through retarded digestion. "An old fowl, likewise," says Dr. Chambers, "has a rank taste, as of a close hen house, because of the absorption into its flesh of the oil furnished by nature to lubricate the feathers."

Whilst shooting at Sandringham in November, 1902, as our King's favoured guest, the Kaiser killed a golden pheasant, and asked that it might be cooked for his own special eating. The Chinese are said to make a great use of pheasants' eggs as a cosmetic to give their hair lustre and brilliancy. "Describe the adventures of the Duke of Monmouth after the Battle of Sedgemoor," was a question propounded to a class under examination; when a brilliant youngster replied, "He changed his clothes with a pheasant, and was found dead in the gutter." A French saying (translated) runs that "In October de Englishman do shoot de pheasant; in November he do shoot himself." Pheasants brains were among the ingredients of the dish which Vitellius named the "Shield of Minerva" in old Roman days.

Grouse (*Lagopus Scoticus*), from the Scotch moors, have flesh of a grey colour, with an excellent aromatic flavour; but they require to be drawn as soon as killed, or they would soon become

tainted; they should be hung long to make them tender, and then always roasted. Sauerkraut (the pickled cabbage) goes well with them, if stewed with butter, and a little wine, in standard broth. "I think," said a wise and gracious hostess "Grouse is a dinner." As an accompaniment nothing can equal French beans, which nature supplies precisely at the right time. The liver of grouse when cooked separately, pounded with butter, salt, and cayenne pepper, is, if spread upon toast, to be much commended. Soyer liked to eat grouse absolutely by themselves, with nothing but a crust of bread. Watercress suits for an adjunct, as with most roasted birds. From twenty to thirty minutes should be the time allowed for roasting a young grouse: but there should be nothing red, or soignant about the bird when carved; if possible it should be taken from the fire promptly after the last likelihood of such a trace has disappeared.

As commendable aids to the digestion of all game, a prune salad, and freshly expressed orange juice, are of service to the invalid; likewise a sauce made with equal parts of orange and lemon juice, with brown sugar added thereto in sufficient quantity. Sir Henry Thompson has told of a wild duck roasted and served without sauce. The bird was served over a spirit lamp, and after some long slices had been carved from the breast, the remains of the bird were put into a nickel-silvered press, when a few turns of the lever brought forth "a quantity of hot, rich, red juice to make a most exquisite sauce."

The Hare (*Lepus*), as to its medicinal uses in whole, or parts, has been considered somewhat fully in *Kitchen Physic*. Here we may sum up its character generally on a consensus of evidence as "melancholy meat," bad for persons disposed to hypochondria, and sluggish liver. The Egpytians expressed a melancholy man by a hare sitting in her form. Lucretius attributed sadness to the influence of hares even amid nature's brightest surroundings.

"Medio de fonte leporum
Surgit amari aliquid quod in ipsis floribus angat."

The poet Cowper (1780) whose lamentable fits of depression are on literary record, chose pet hares, Puss, Tiny, and Bess, wherewith to try and divert his mind.

"Never give way to melancholy," taught Sydney Smith, "resist it steadily, for the habit will encroach. I once gave a

lady two and twenty recipes against melancholy: One was a bright fire; another to remember all the pleasant things said of and to her; another to keep a box of sugar-plums on the chimney piece, and a kettle simmering on the hob. I thought this mere trifling at the moment, but have in after life discovered how true it is that these little pleasures often banish melancholy better than higher and more exalted objects."

The flesh of a hare is such dry food that cooks have a saying, "A hare with twelve pennyworth of sauce is worth only a shilling." Matthiolus prescribed hare's liver dried, and reduced to powder, as a specific for biliary derangements; this was anticipating the advanced scientific treatment now recognized of such disorders by an animal extract from the same healthy organ (of sheep, calf, etc.), as that at fault in the human subject. The iodine value, and drying property of hares' fat are remarkable, as showing the presence therein of an unsaturated acid. The hare was not eaten by the ancient Britons. Hippocrates forbade its use because thickening the blood, and causing wakefulness. None the less hare soup is a favourite English dish having some of the blood included. The proverbial phrase "first catch your hare" (before proceeding to cook it), was attributed to Mrs. Glasse in Dr. Johnson's time, this having actually been a misprint in her Cookery book, for "first case (or, skin) your hare." The aphorism signifies that before disposing of a thing one should first make sure of possessing it. In Shakespeare's time there were several superstitions about the hare; its shape, and aspect were thought to be assumed frequently by witches; the blood was reputed to cure ringworm, a bone of the hind leg prevented cramp, the skin burnt to powder stanched blood, and the animal was believed to have taught men the medicinal virtues of the succory plant.

Under the Levitical law propounded by Moses the hare was prohibited as food for the Israelites because "he cheweth the cud, but divideth not the hoof, therefore he is unclean unto you."

Charles Lamb devoutly favoured roasted hare as delicious food. "Pheasants," said he, "are poor *fowls* dressed in fine feathers! but a hare! roasted hard and brown, with gravy and melted butter!" Old Mr. Chambers, the sensible clergyman in Warwickshire, used to allow a pound of Epping to every hare. Perhaps that was overdoing it! But in spite of the note of

Philomel who reiterates every Spring her cuckoo cry of Jug-jug-jug, Elia pronounces that a hare to be truly palated must be roasted; jugging sophisticates her, whilst in our way it eats so "crips," as Mrs. Minikin, the cook, says. Nash tells in his Spring song for that season :—

"Cold doth not sting, the pretty birds do sing,
Cuckoo, jug-jug, pu-we, to-witta-woo."

"The ancients must have loved hares, else why adopt the word *lepores*, but for some subtle analogy between the delicate flavour of the creature and their finer relishes of wit in what we poorly translate *pleasantries*. In fact, how light of digestion we feel after a hare! How tender its processes after swallowing! What chyle it promotes! How etherial, as if its living celerity were a type of its nimble coursing through the animal juices!" Incidentally elsewhere Lamb says that bullock's heart is a substitute for hare. Certain large hares in the United States are "Jackass rabbits." Sam Weller in *Pickwick* described a fidgety invalid as "A genlem'n of the precise and tidy sort who puts their feet in little India-rubber fire-buckets wen it's vet vether, and never has no other bosom friends but hare-skins." Piscator, in Izaak Walton's *Compleat Angler*, teaches Scholar "there are many country people that believe hares change sexes every year; and there be very many learned men think so too, for in their dissecting them they find many reasons to incline them to that belief."

The Rabbit, *Lepus Cuniculus*, which we know so well in its wild state as a most prolific little animal, and of much popularity as a food for the working classes, "thrives best," says Fuller, "on barren ground, and grows fattest in the hardest frosts; their flesh is fine and wholesome." Both this animal and the hare affect some persons who partake of either, with nettlerash, or spasmodic asthma. Rabbit pie made without a hole in the top crust to let ptomainic vapours escape, as generated by the flesh whilst being baked, has proved actually poisonous in several recorded cases. "Talbotays" was a former sauce taken with rabbits and hares, being concocted of the blood, with pepper, salt, and ale. In Yorkshire there is a familiar nursery rhyme :—

"Rabbit, rabbit, rabbit pie,
Come my ladies, come and buy,
Else your babies they will cry."

Rabbit flesh somewhat resembles fowl. The thin sides about the ribs of a rabbit, and the flabby belly flanks are always of a bad taste, and should be removed in the trimming of the animal, so as not to be used. For the same reason it is never advisable to fill a rabbit with stuffing inside the belly. Likewise care should be exercised only to approve of a sound liver for cooking, as free from nodules, or discoloured spots. In Lear's *Book of Nonsense* (about which Ruskin pronounced, "*The Book of Nonsense*, by Edward Lear, with its corollary carols, inimitable and refreshing, and perfect rhythm, is surely the most innocent and beneficial of all such books") occurs the quaint jingle :—

"There was an old person whose habits
Induced him to feed upon rabbits;
When he'd eaten eighteen, he turned perfectly green,
Upon which he relinquished those habits."

The Woodcock (*Scolopax Rusticola*), gets its food mainly by suction, and is clean for cooking in its entirety, except the gizzard, after being plucked of the feathers. The flesh is better as the winter advances. It may be eaten with benefit by asthmatic persons, but cannot be kept fit for the table long after being killed: the rump and the loins are furnished with firm white fat. Montreuil has a high reputation for its woodcock *patés*. In English clubs when woodcocks and snipes are served, their heads are taken off and returned to the kitchen, from whence they reappear at the end of dinner smothered in mutton fat, and well seasoned with salt and pepper; thus prepared they are presented on a plate to each guest, accompanied by a lighted candle. The guest then grills, or rather burns, the head in the flame of the candle, and proceeds to crunch it whilst still spluttering with the heat, having first well smothered it with cayenne pepper. So says M. Suzanne. Neither bread-sauce, nor fried crumbs are usually served with woodcock. Some persons choose an orange sauce, or cranberry jelly, or red currant jelly. Few dainties can rival a woodcock simply roasted: dress it (likewise red mullet) with a little butter: the gravy which comes from each of them is its best sauce. Open fire roasting is the only means of doing culinary justice to this noble bird; the inequality of roasting because of the legs makes it clear that such a delicate operation cannot be anyhow effected in a baking oven. The time for cooking may be estimated at from fifteen to twenty

minutes, but if over-cooked the bird becomes tough, and without savour. Serve on toast, and garnish with watercress.

Retrievers do not like the scent of the woodcock, and will frequently decline to bring it in. November and December are the woodcock months.

"A la Saint Michel
Becasse tombe du ciel."

A curious doctrine termed "Totenism" was held of old among the Greeks, and the North American Indians, this signifying the existence of persons who asserted their several claims to descent from, and kinship with certain birds, beasts, or vegetables. Wherefore because of the particular "totem," or family association, each of such persons would religiously abstain from eating his, or her, own kindred creature, or plant. Thus in his *Roman Orations*, Plutarch asks, "Why do the Latins abstain strictly from partaking of the Woodpecker's flesh?" (*Picus*). It was the Roman "gens," the *Piceni*, which specially took the woodpecker for its totem. In Australia we hear of a medicine-man whose *clan* totem through his mother was a kangaroo, but whose individual (secret) totem was the tiger-snake, on which account snakes of that species would not hurt him. Longfellow in *Hiawatha* refers to this particular custom.

"And they painted on the grave posts
Each his own ancestral *totem*,
Each the symbol of his household,
Figures of the bear, and reindeer,
Of the turtle, crane, and beaver,
Each inverted as a token
That the owner was departed."

Venison.—The flesh of the deer, is particularly digestible by invalids because of its looseness of fibre, and texture, which permits a special ready access of the gastric juices. But it must not be hung long enough to become at all corrupt, so as to engender ptomaines afterwards within the stomach, or bowels. Robert Lovell (1661) said the flesh of the buck is dry, and causeth piles, except used with pepper, cinnamon, and mustard. Venison, which is a highly savoury food, consists of albuminates, or nutritive solids, nineteen parts, fat two parts, and water seventy-nine parts. It was formerly served in Egypt, as by Joseph to

his brethren, together with furmity made from wheat. If eaten too freely, the flesh will breed melancholy. It should never be eaten in a hurry," wrote James Payn, "as though it were a soup at a railway station. Like a moderately good picture at the Academy Exhibition it should be hung, and not too high." If it only smelt as nice as it tastes, it would be a public boon, but often as the time comes for dressing it, the cook "thinks as it ought to be put underground before it produces a pestilence, and puts *her* there, too." Venison Panada will please the sick sportsman, this being a preparation of bread soaked, softened, and flavoured with a purée of venison. The famous Robin Hood said to Henry the Eighth in Sherwood Forest, "Sir, outlaws' breakfast is venison, and therefore you must be content with such fare as we use. Then the king and queen sate down, and were served with venyson, and wyne, by Robin Hood and hys men, to theyre great contentacion."

> "For, finer, or fatter
> Ne'er ranged in a forest, nor smoked on a platter.
> The haunch was a picture for painters to study,
> The fat was so white, and the lean was so ruddy."
>
> Oliver Goldsmith's *Haunch of Venison.*

The name "alderman's walk" is given to the centre cut (long incision) of the haunch, where the most delicate slices are to be found. Venison pasty, formerly so much esteemed, owed its attraction chiefly to the currants placed between the layers of meat. Roger Bacon commended venison, "for," said he, "that which liveth long by his own nature maketh others also to live long." In Borneo, the men may not eat the flesh of the deer, though it is allowed to the women and children. The reason given is that if the men were to eat venison they would become as timid as deer. Rebecca, of the Old Testament, must have cooked with considerable skill, as she converted the kid into savoury meat so nearly resembling venison as to be eaten for it by the blind old patriarch Isaac, who evidently could appreciate venison as much as do modern epicures.

Among the privy purse expenses of Henry VII (1490), under date August 8th, occurs the item, "to a woman, three shillings and four pence, for clarifying deer suet," to be used by the King, not for culinary, but for medicinal purposes. It was then, and much later employed as an ointment. "*Quod olfactu fœdum est, idem est esu turpe,*" says the *Comic Latin Grammar,* "that

which is foul to be smelled is also nasty to be eaten (except venison, onions, and cheese)." Shakespeare knew that at the rutting season the hart's horn is dangerous, "if thou be hurt with hart it brings thee to thy bier." But under ordinary circumstances the burnt horn of a stag was given against worms, and hart's grease was a remedy for the gout. "The fat, or suet, and the marrow of venison (the stag) applied outwardly, are very good against rheumatism, and for dissolving tumours, for sciatica, and to fortify the nerves." A venison dinner is customary annually at Farnham, over which the Bishop of Winchester presides. This is a survival of the grand old days when the lords of Farnham Castle were princes as well as Bishops. In 1892, the stair carpets there were measured by miles. Samuel Pepys, January 6th, 1659, "took his wife to their cosen Thomas Pepys, and found them just sat down to dinner, which was very good, only the venison pasty was palpable mutton, which was not handsome."

Quails (*coturnix*), though for the most part imported into this country, yet find their way commonly into game-sellers shops, and afford for the invalid as delicate, succulent, easily digested a little dish as can well be desired, though lacking a true gamey flavour. As many as two hundred thousand are brought in a month to Leadenhall Market during the season. Such great quantities have been captured in the Isle of Capri, near Naples, as to afford the Bishop the chief part of his revenue, and distinguish him as the Bishop of Quail. The most approved way of cooking a quail is to envelop it in a very thin slice of bacon, tie it up in a large vine leaf, and then roast it; or again, *en papillote*, in a paper case. Also a cold quail pie is a capital dish for persons in good health.

"He that feeds never on worse meat than quails,
And with choice dainty pleaseth appetite,
Will never have great lust to gnaw his nails,
Or in a coarse, thin diet take delight."

The quail is a clean, plump bird, feeding at night on insects and seeds. It abounds at the Cape in October and November, being generally cooked there in a baking pot, or made into a curry. The flavour of a quail is very volatile, and whenever it is brought into contact with liquid the perfume evaporates, and is lost. Sicilian quails, sent alive to this country, are fattened *en route* on hemp seed, and ground corn soaked in oil.

The Romans diverted themselves with fights between the male birds pitted one against another; and it was with quails of the same species the Israelites were fed of old in the wilderness, and became plague-stricken for their greed. "And there went forth a wind from the Lord, and brought quails from the sea, and let them fall by the camp, as it were two cubits high upon the face of the earth. And the people stood up all that day, and all that night, and all the next day, and they gathered the quails, and they spread them all abroad for themselves round about the camp. And while the flesh was yet between their teeth, ere it was chewed, the wrath of the Lord was kindled against the people, and the Lord smote the people with a very great plague; and he called the name of that place Kibroth-hattaavah (the graves of the greedy), because there they buried the people that lusted." The ancient Romans feared quails because supposed to cause epileptic fits; but these birds are said to have cured Hercules of epilepsy.

GARLIC.

ALLIUM sativum, or garlic, a bulb of strong oniony odour, and pungent taste, consists in fact of numerous bulblets known technically as "cloves," and grouped together within one whitish integument, or capsule, which holds them as it were in a sac. An essential oil of garlic, as obtained by distillation with water, is a sulphide of the radical allyl, to which most of the special properties of garlic are due. This oil contains much sulphur, but no oxygen; all the volatile oils of the onion and cabbage tribe are sulphurised. Dumas has described the very air of Southern France, particularly of Provence, as perfumed with the refined essence of this mystically attractive bulb; but on the other hand Dr. King Chambers writes, "Another article of cuisine that offends the bowels of unused Britons when abroad (in France, Italy, Spain, and Germany) is garlic; so that not uncommonly in Southern climes an egg with the shell on is the only procurable animal food without garlic in it. Flatulence and looseness are the frequent results. Bouilli, with its accompaniments of mustard sauce, and water melon, is the safest resource, and not an unpleasant one after a little education." Sydney Smith, writing to Lady Holland, his daughter, January, 1836, said, "Mrs. Sydney and I have been

reading Beauvilliers' book on cookery, from which I find, as I suspected, that garlic is power." In November, 1810, he had said to Lady Grey, "I am performing miracles in my parish with garlic for whooping cough." Likewise from York, in 1818, "We conquered here the whooping cough with a pennyworth of salt of tartar; after having filled the sufferers in vain with Dr. Alford's expensive poisons. What an odd thing that such a simple specific should not be more known!" Again, writing from Heslington, 1813, he tells his friend Jeffreys, "I have been spending some weeks of dissipation in London, and was transformed by Circe's cup, not into a brute, but a beau. I am now eating the herb moly in the country." Wild garlic, *allium moly*, represents the fabled moly of Homer as given by Hermes to Odysseus for counteracting the spells of Circe.

It is to the intensely-smelling sulphuret of allyl that garlic and the onion owe their peculiar odour; and the rank aroma of the breath after eating these plants is caused by the constant presence of such oil in minute quantities exhaled from the lungs into the air; it exudes likewise through the pores of the garlic-eater's skin, and characterises the perspiration. The odour is so diffusible that it is given off from the lungs even when garlic is applied to the soles of the feet only. If sniffed into the nostrils it will revive an hysterical sufferer. The smell thereof is the most acrimonious of all the onion tribe. Many marvellous effects, and healing powers have been ascribed to garlic, the leek, and onions, their juices and preparations. Amongst physiological results it is reported that garlic makes the eye retina more sensitive, and less able to bear strong light. Dr. Pearse, of Plymouth, 1902, has reported concerning the remarkable longings of the Irish peasantry for garlic, and their faith in its value for curing coughs. During twenty-five years his experience has met with the same craving in consumptively inclined patients at Plymouth; he concludes that there must be some state of molecular energy in the leek, and onions, which serves to furnish the body of a consumptive person with the true correlative for maintaining healthy growth. "Such," he adds, "is the craving for onions by consumptive patients, and such the agreement of these odorous bulbs therewith, that I do not doubt that this is an instance parallel with that of the Swiss, who by some instinct, or evolved experience, have learnt to eat burnt sponge for the dispersion of their throat goitre, or

with the passion of the poorly fed Hindu for tamarinds, and lime-juice.

For chronic bronchitis garlic is of particular virtue ; therefore such garlic is largely used by country people throughout Ireland, enjoying among them a reputation for curing coughs when it is made into a tea, or mixed with whisky. It is also pounded and employed as a poultice for scrofulous sores; and further, it is said to prevent anthrax, or "blackleg" in cattle, being used largely for such a purpose. The old-fashioned syrup of garlic is made by first pouring a quart of boiling water upon a pound of the fresh bulbs cut in slices, putting the same in a close earthen vessel to stand for twelve hours, then the syrup is made of this infusion slowly cooked with the proper quantity of sugar. But indeed garlic ought never to be actually boiled, because by this treatment the essential oil on which the whole virtue of the garlic depends becomes exhaled, and dissipated. To be taken as a medicine garlic is stimulating, and agrees capitally with persons of a cold, passive temperament, but it offends and upsets others who are of a hot feverish disposition, and apt to become dyspeptic.

Dr. Minchin, medical officer at Kells, published (1902) articles on the successful treatment of tubercular consumption, and of lupus (an erosive skin disease) by garlic. He finds that the allium sativum exercises a specifically destructive action on the bacillus of tubercle, at all events in the human subject. Cases of very encouraging cure in confirmed consumption are given by him in detail. The freshly expressed juice from the garlic, without removing the chlorophyl, is used by him, being most reliably prepared at home. When diluted with an equal quantity of water (or dilute spirit of wine), this is inhaled antiseptically on a small extemporised inhaler made of pliable perforated zinc plate, (as introduced by Dr. Yeo); some of the liquid being put afresh on the sponge of this inhaler three times during the day, and the inhaler being worn constantly (except at mealtimes) over the mouth and nose. Respecting this mode of treatment, Dr. Berdoe writes, "the only objection thereto is the offensive smell of the remedy as due to the sulphides, and oxides of allyl. No doubt this has militated against the employment of the onion tribe in regular medicine, since its virtues in bronchial troubles, and as affording topical remedies for abscesses, sores, etc. have always been recognized by country

folk. I look upon it as a perfectly safe treatment, efficient in most cases of incipient tubercular disease of the lungs, in nearly all cases moderately advanced, and in many very advanced cases. Its action is fairly rapid, and the treatment is scarcely open to any objection, it being readily applicable to all cases of consumption, whether in the well-to-do, or the poorer classes, either at home, or in the general wards of a hospital. I have had so much success with it that I have come to look upon few cases of consumption as hopeless." If intestinal troubles are further present, Dr. Minchin gives the garlic juice also by the mouth, in doses of twenty drops diluted with water, and repeated several times a day. Garlic in syrup promotes expectoration, and is therefore beneficial in the chronic bronchial affections of aged, weakly subjects. It has been related in *Kitchen Physic* how Cavazanni at Venice throughout more than two years used garlic with remarkable success for tubercular consumption, having treated more than two hundred cases, all of which were shown by a bacteriological inspection of the sputa to be undoubtedly consumptive.

For imparting a mild flavour of garlic to a salad of endive, or chicory, a crust of stale bread which has been rubbed with garlic is sometimes placed at the bottom inside the bowl, this being called in France a capon (chapon). It was originated by the Gascons, who were poor, but vain, so that it occurred to one of them to name this flavoured crust a capon, in order that he might truthfully tell his friends he had dined superbly on a capon, and salad. A clove of garlic inserted in the knuckle of a shoulder, or leg of mutton will impart a slight, but distinct flavour to the whole joint; and a rump steak is improved in taste if served on a plate first rubbed over with a clove of garlic cut in two. For an adult taking garlic remedially on account of bronchial trouble. one or more cloves may be eaten at a time. Raw garlic applied to the skin reddens it; when bruised and mixed with lard, it makes a very useful counter-irritant opodeldoc. If employed thus over the chest in front, and between the shoulder blades behind, of a child with whooping cough, it proves eminently helpful. Old Fuller says, "indeed a large book has been written *de esu allii*, about the culinary virtues of garlic, which book, if it hold proportion with truth, one would wonder that any man should be sick and dye who hath Garlic growing in his garden. Sure I am our palate-people are much pleased therewith as giving

a delicious *haut goût* to most meats they eat, as tasted, and smelt in their sauce, though not seen therein." The old Greeks, in their fastidious refinement detested garlic. It is true the Attic husbandmen ate it from remote times, probably in part to drive away by its odour venomous creatures from assailing them; but persons who partook of it were not allowed to enter the temples of Cybele. Horace, among the Romans, was made ill by eating garlic at the table of Mœcenas, and he afterwards (Epode the third) reviled the plant as "*Cicutis allium nocentius*," garlic more poisonous than hemlock.

> "If his old father's throat any impious sinner
> Has cut with unnatural hand to the bone,
> Give him garlic—more noxious than hemlock—at dinner.
> Ye Gods! what strong stomachs the reapers must own."
>
> Translation by Sir Theodore Martin.

When leprosy formerly prevailed in this country, garlic (most acrimonious of odour) was a prime specific for its relief, and as the victims had to "pil" (or peel) their own garlic, they got the nickname of Pilgarlics; hence too it came about that any one shunned like a leper had this epithet applied to him, or her. Durand, the gallstone specialist, advised the free use of garlic to his patients. A garlic clove, when introduced into the lower bowel, will destroy thread worms, and, if eaten, will abolish round worms.

GELATIN.

Jellies for the convalescent give benefit chiefly by the gelatin which is their basis. It is a leading constituent of young animal flesh, veal, calf's foot, trotter, etc., in its connective tissue. Likewise it occurs purely in isinglass from the swimming bladder of fish, especially the sturgeon. Gelatin is soluble in boiling water, easily digested, and has the advantage of fixing the acids during digestion, being thus of service in cases with an excess of gastric juice. But the main value of gelatin is as an economiser of primitive food-substance (proteid). Whilst not a food of itself, it materially enhances the nutritiveness of other products with which its combination occurs. Jellies are thereby fundamentally improved, so that the old-fashioned notion of calf's foot jelly is founded on a substantially useful fact, as regards its sustaining properties. Such jelly also supplies sustenance

by its sugar. Bones are a common source of gelatin, but dog's fed exclusively on ground bones have failed to survive; it being thus proved that gelatin alone cannot maintain life, and that plain jellies are not of themselves substantial food. Nevertheless, light animal jellies are of distinct service for the delicate invalid. Several varieties, such as hartshorn jelly, ivory jelly, sick room jelly (Francatelli's), and brown bread jelly, are formulated in *Kitchen Physic*. Likewise, milk jelly, vaseline jelly, apple jelly, and meat jelly, are to be commended under varying bodily requirements.

Isinglass is the purest form of commercial gelatin, the best being prepared from the sounds, or air bladders of fish, whilst that of a second rate quality is made from clean scraps of hide, from skins, hoofs and horns; also in Bengal from some seaweeds. There are "lyre," "leaf," and "book" isinglass. When combined with brandy, isinglass makes an excellent cement for mending broken china. Isinglass of good quality contains osmazome, gelatin, and some salts of potash, soda, and lime. It is emollient, and demulcent, and serves as a useful subsidiary nutriment for the invalid, whether added to milk, broth, or made into a jelly. Boil an ounce of isinglass, and a dozen cloves, in a quart of water down to a pint, strain hot through a flannel bag on to two ounces of sugar candy, and flavour with a little angelica, or with two or three teaspoonfuls of some approved liqueur. For an isinglass jelly, to be given in dysentery, or chronic diarrhœa: dissolve one ounce of isinglass in a pint of water over the fire, add an ounce of white sugar, and a pint of good port wine, strain through muslin, and allow it to set. The old name Icthyocolla is derived from *icthus*, a fish, and *kolla*, glue.

Strange as it may seem, a clear day is usually much better for making fruit jellies than a cloudy one, because the atmosphere affects the boiling of the sugar. Blanc mange prepared now-a-days with milk and some starch such as of corn flour, so as when boiled, and having become cold, to form an opaque jelly, was originally a soup, composed of consommé of lean meat, with milk of almonds, and spiced with cinnamon, or cloves, or made from roast fowl, minced, and pounded, or veal treated in like manner. If properly supplied in our modern way, it should be a jelly prepared from calf's foot, or gelatin, with milk of almonds. The word jelly was formerly gelly, as signifying

gelatus, congealed, or frozen with cold. For making a meat jelly: Take half an ounce of gelatin, and dissolve it in half a teacupful of cold water. Cut the meat from half a chicken, cut up half a pound of veal, and half a pound of gravy beef, and put all these into a saucepan, with half a pint of cold water, and a little salt. Stand it at the side of the fire, and simmer slowly. Put the chicken bones, and any bones from the veal, into another saucepan, covering them with cold water, and let them boil gently for three or four hours. Pour the liquor from both saucepans into a basin, and add the dissolved gelatin. Strain two or three times through muslin until quite clear, then pour into a mould, rinsed previously out of cold water, and put the jelly aside in a cold place to set.

Calves' feet, free from bone, yield twenty-five per cent of gelatin on boiling, therefore they are well known for affording abundant substance for a pure jelly; but we find that the cost of procuring the jelly in this way from the feet is sixteen times as much as to use good commercial gelatin for the purpose. It is better to add such gelatin to plain good stock (as of chicken) than to boil up veal or calves' feet for the jelly, which of itself is poor nutriment. Ordinary jellies can only be regarded as dear foods, and the calf's foot jelly of the shops yields no building material at all.

For milk jelly: Take one pint of milk, half an ounce of gelatin, and one ounce of white sugar. Boil up the milk, and add the sugar; dissolve the gelatin in a little milk, or water; heat this up, and put it with the sweetened milk; cool a little, and pour into a wetted mould in a cool place; turn out when set. Vaseline jelly, or petroleum jelly, makes an admirable intestinal antiputrescent, and destroyer of microbes within the digestive tract; it is also demulcent in some way, even although taken up but sparingly as a food. Indeed, Dr. Hutchison contends that the petroleum when swallowed in this form can be discovered finally in the fœcal excrement which passes out of the bowels. If made into an emulsion with cream, the petroleum is found to defeat alcoholic, lactic, and butyric fermentation, preventing any self-poisoning by noxious matters absorbed into the blood from the bowels. The purest petroleum is white vaseline.

Tea jelly and coffee jelly, though affording but little nourishment, are of a revivifying character, and frequently of service to the invalid. For the former: Soak half an ounce of good

gelatin (Nelson's) in half a pint of water for an hour, so as to quite dissolve it; then add a breakfastcupful of strong, clear, fragrant tea, just made; sweeten to taste, and put into the mould for setting, adding perhaps a little cognac, if expedient. Coffee jelly may be prepared in like manner, whilst substituting strongly-made fresh coffee instead of the tea infusion. Whipped cream, if served with these jellies, will make them more nourishing.

For apple shape jellied, take one pound of (rennet) apples, one pound of sugar, three quarters of an ounce of gelatin, and a little seasoning of lemon peel, or clove. Add a teacupful of water to the sugar, and boil for five minutes. Cut the apples neatly into quarters, core them, and stew into the syrup until quite clear. Take out the apples and put them nicely into a buttered mould. Soak the gelatin and add it to the syrup, then let it boil a little, and when slightly cooled pour into the mould. Turn out when cold, and serve with whipped cream if allowed. An apple jelly has little or no perfume of its own, and therefore it may be pleasantly, as well as usefully, flavoured with orange flowers, orange, quince, cherries, or rose water.

Cherry jelly is a delicate confection for a capricious stomach liable to nausea. Crush the succulent cherries, and take out the stones, except from about one-eighth part of the fruit used; these stones should be bruised, and left, so as to impart a sufficient taste of almonds to the jelly; they should be strained out before cooling. But Cherries possess pectin, or solidifying juice, only to a small extent; therefore a quarter of the same weight of red currants should be added. Put the whole into a preserving pan with rather less sugar than fruit, but using an equal weight of each if the Cherries are watery, or very acid; bring up to the boil, and keep it at this for a quarter of an hour; then pour the contents of the preserving pan on a sieve over an earthenware dish, and allow them to drain. When the mass in the sieve is sufficiently cooled, squeeze the remaining juice out by wringing in a cloth; next put the juice into the preserving pan again, bringing it up to the boil, and keep it at this until the jelly has reached the proper degree of consistence; then take it off the fire, let it cool a little, and fill the pots.

For Blackberry jelly, take two pounds of Blackberries, a quarter of a pound of white sugar, and half an ounce of gelatin; extract the juice from the fruit by putting it in the oven in a jar

for a few hours, then strain through a muslin bag placed over a colander. Soak half an ounce of Gelatin in a little water, and add this to the Blackberry juice, with a quarter of a pound of white sugar, and boil all for half an hour. Put it into a wet mould, and turn out the next day. The same recipe will serve for preparing Mulberry jelly, whilst making use of this fruit instead of Blackberries.

Ginger jelly, which is excellent as a stomachic adjunct to stewed fruits, may be readily made by adding extract of the root (*see* "Ginger") to water sweetened to taste, and into which when boiling a quarter of an ounce of Gelatin is stirred so as to become dissolved.

GIN.

(*and See* SPIRITS).

As an ardent spirit Gin is obtained by fermenting a mash of malt and rye, this product being distilled, and re-distilled, whilst some juniper berries, with a little salt (and sometimes hops) are added in the final distillation. The two important varieties of Gin are Dutch "Hollands," or Schiedam, and English Gin, known when sweetened, and diluted, as "Old Tom." This last appellation was got from the fact of Gin having been sold surreptitiously by the twopennyworth, when to supply less than two gallons at a time was forbidden by law. A leaden pipe was passed cunningly through the vendor's wall beneath the paw of a cat, which animal figured outside, the money being put into the cat's mouth by illicit purchasers of the spirit, as then dispensed from inside by means of a funnel through the pipe. The tavern bearing this sign of a cat ("Old Tom") was in Blue Anchor Alley, Saint Luke's. Hollands Gin is almost free from sweetness, and is generally more pure than English Gin, which is of all spirits the poorest in alcoholic strength. Juniper berries, as used in making the best Gin, contain juniperin, sugar, resins, wax, fat, with formic, and acetic acids, also malates; they afford a yellow, aromatic oil which acts on the kidneys, and gives a sense of cordial warmth to the stomach. In France, and Italy, the berries are eaten raw, fifteen or twenty at a time, to stimulate a flow of urine. Likewise by an old Tract (London 1682), *On the use of Juniper, and Elder berries in our Publick Houses*, we are told that "the simple decoction of these berries.

sweetened with a little sugar candy, will afford liquors so pleasant to the eye, so grateful to the palate, and so beneficial to the body, that the wonder is they have not been courted, and ushered into our Publick Houses, so great are the extraordinary beauty, and virtues of these berries." Purple, aromatic Juniper berries grow commonly in England on a low, stiff evergreen Conifer shrub, about heathy ground. They serve to make a capital liqueur, half a pound of the crushed berries being infused for a fortnight in two quarts of brandy, with six ounces of loaf sugar, closely stopped down, then strained off, filtered, bottled, and corked securely. The prophet Job has told about rude wanderers driven forth from among men to dwell in caves and rocks, who taunted him with cruel derision: "They cut up mallows by the bushes, and Juniper roots (bitter, and harsh fodder) for their meat." In much more modern times, as saith *The Husbandman* (1750), "When women chide their husbands for a long while together it is commonly said they 'give them a Juniper lecture,' which, I am informed, is a comparison taken from the long lasting of the live coals of that wood, not from its sweet smell; but comparisons run not upon all four." In France the Thrush is specially esteemed for table use because of the Juniper berries on which it grows fat. When this bird is cooked its crop, redolent of the woodland Juniper, is left untouched; whilst to each plump breast an apron of sliced fat bacon is fitted, the bird being then threaded with others on a thin spit, and set twirling to roast before a brisk fire of vine trimmings. Juniper berries, besides being fragrant of smell, have a warm sweet, pungent flavour, which becomes bitter on further mastication. Sprays of the Juniper shrub are sometimes strewn over floors of apartments so as to give out when trodden-upon their agreeable odour, which is thought to promote sleep. The Prophet Elijah was sheltered from the persecutions of King Ahab by a Juniper tree; since which time the shrub has been always regarded as a place of refuge, and as a symbol of succour. The berries are said to have performed wonders in curing the stone. Evelyn has named them the Foresters' Panacea, "one of the most universal remedies in the world to our crazy Forester." In a case of any painful local swelling, rheumatic, or neuralgic, some of the bruised berries, if applied topically, will afford prompt, and lasting relief.

Formerly by the use of Juniper berries one Sir Theodore

Mayerne (1645) cured patients deplorably afflicted with epilepsy, when every other tried remedy had failed. His dictum was "let the patient carry a bag of these berries about with him, and eat from ten to twenty of them every morning for a month, or more, before breakfast. The berries should be well masticated, and the husks either rejected, or swallowed. In France the Genièvre (Anglice "Geneva"), from which we derive our word "Gin," is made from these berries. But at present English Gin is more cheaply manufactured by leaving them out altogether, and giving the spirit their flavour by distilling it with a portion of oil of turpentine, which somewhat resembles the Juniper berries in taste. Again, much so-called Gin is fabricated out of silent spirit tinctured with Juniper, salt and turpentine. The "Gin fizz" of Philadelphia is a drink composed of Gin, lemon-juice, and effervescing water, with, or without sugar. Gin applied externally is destructive to parasites. Carlyle was cruelly severe on Charles Lamb, against whom he attributed "an insuperable proclivity to Gin." "Poor old Lamb's talk is contemptibly small, and usually ill-mannered to a degree, a ghastly make-believe of wit! A Cockney to the marrow." The famous Dr. Samuel Johnson, though often rough, and surly as a bear, had in reality a tender heart, and his charity was unbounded, though he was never rich. He would fill his pockets with small cash, which he distributed to beggars, in defiance of political economy. When told that the recipients of his money only laid it out upon Gin and tobacco, he replied that it was savage to deny them the few coarse pleasures which the richer folk disdained. Because of its diuretic action in promoting a free flow of urine, whether by reason of its admixture with Juniper, or through its containing turpentine, Gin is of signal use for helping to relieve some forms of dropsy; which affection is not of itself a disease, but symptomatic of obstructed circulation in the liver, the heart, or the kidneys. This being the case, any remedial treatment must of course be directed to the particular organ at fault in every case, whether one of those already named, or the brain, the pleura, or the abdominal peritoneum. Certain signs serve in a measure to indicate the kind of dropsy which is present; that of the kidneys declares itself by swelling at first in the face, and the upper extremities, with puffiness of the loose tissues about the eyelids; that of the heart begins with swelling of the feet, and ankles, which gradually

moves upwards ; that of the liver is chiefly denoted by abdominal enlargement. In dropsy from congested kidneys it is always questionable whether diuretics are not likely to do harm by mischievously stimulating these organs already overfull of blood.

GINGER AND GINGERBREAD.

Except for its popular essence as a stomachic, Ginger is better known to the cook, and confectioner, than as a medicament. Nevertheless, this condimentary root-stock, crushed, or in powder, will serve most admirably as a stimulant in various bodily emergencies. Its restorative effect is immediate, and more telling than that of alcohol ; furthermore, its pain-relieving qualities are positive, though the *modus operandi* cannot be easily explained. Whenever there is a sudden reduction of the temperature, with coldness of the skin and extremities, and with a sense of depressing chill, all accompanying some severe pain, Ginger in a quickly operating form will afford prompt, and specific relief. It is the rhizome of a plant which grows in the East, and West Indies, and is scraped before importation. Its odour is due to an essential oil, and its pungent, hot taste to a resin. For gouty indigestion the root may be powdered in a mortar, and a heaped teaspoonful of it should then be infused in boiling milk, to be taken warm at supper, or at breakfast. Ginger is best suited for persons of relaxed habits, especially when from the pale peeled root. For making an essence of Ginger, take three ounces, freshly grated, and an ounce of lemon peel, cut thin ; put these into a quart of French brandy, and let it stand for ten days, shaking it daily. Half a wineglassful of the same may be taken for a dose, with (or without) hot water. It will speedily subdue colic, or flatulent spasms. In cases of inert constipation, because the intestinal energies want rousing into activity, Ginger is an excellent spice, particularly in the form of Gingerbread, made also with honey, and brown treacle. Recipes for Ginger cake, and a Gingerbread loaf, as well as for Yorkshire "parkin," are given explicitly in *Kitchen Physic*. Preserved Ginger (imported) is a capital sweetmeat, which is cordial, and somewhat laxative. It is prepared by scalding the Ginger roots when they are green, and full of sap, then peeling them in cold water, and putting them into round jars with a

rich syrup. This Ginger when cut into thin strips makes a delicious, and wholesome filling for sweet sandwiches.

Dr. Tobias Venner (1620) advised the Universities that "green Ginger is good for the memory; whilst a conserve of Rosemary, and Sage, if often used by students, particularly in the morning when fasting, doth greatly delight the brain." An extract of Ginger, very serviceable for domestic uses, may be made by crushing half a pound of fine whole Ginger in a mortar, and putting the same into a wide-mouthed bottle with half a pint of unsweetened Gin; let it stand for a month, shaking it from time to time; then drain it off into another bottle, allowing it to remain undisturbed until it has become clear. If a piece of Ginger root is chewed it causes a considerable flow of saliva, and will thus relieve heartburn by the patient swallowing the alkaline saliva as it continues to be secreted. Powdered Ginger mixed with some water into a paste, and applied against the skin, will produce much tingling, and heat of surface; to which end it may be spread on brown paper, and put as a plaster on the temples, or against the back of the neck, as a means for relieving the headache of passive fulness. Queen Elizabeth (so say the *Arcana Fairfaxiana*, 1640) had a famous "pother" (powder) "to be used att anietime after, or before meate, to expel winde, comforte ye stomack, and help digestion. It was composed chiefly of white Ginger, powdered with Cinnamon, Anise, Caraway, and Fennel Seed, pounded, and searced (sifted)."

For making Brandy Snaps of Ginger, which are carminative, and gently relaxing to the bowels, take one pound of flour, half a pound of coarse brown sugar, a quarter of a pound of butter, one dessertspoonful of allspice, two dessertspoonfuls of ground ginger, the grated peel of half a lemon, and the juice of a whole lemon; mix all together, adding half a pound of dark brown treacle (not golden syrup), and beat well. Butter some sheet tins, and spread the paste thinly over them, and bake in a rather slow oven. When done, cut it into squares, and roll each square round the finger as it is raised from the tin. Keep the Snaps in a dry, closely-covered tin, out of any damp, so that they shall remain crisp.

Now-a-days Ginger Ale is made thus: Of plain syrup, one gallon; essence of Ginger, four ounces; essence of Cayenne pepper, one ounce; white wine vinegar, four ounces; burnt

sugar, for colouring, half an ounce; mixed together, and to be used from an ounce to an ounce and a half to each bottleful of water, or mineral water. The Ginger beer of ordinary use, as provided in stone bottles, and fermented with yeast, contains at least 2 per cent of alcohol as the result of its fermentation proceeding to the vinous stage. Dr. Robt. Hutchison, in his *Food and Dietetics* (1902) avers that the article named Ginger beer, as now commonly sold, may have nothing to do with Ginger at all, because the requisite degree of sharpness is usually obtained by aid of tincture of capsicum (Cayenne pepper). Genuine fermented Ginger-beer is a very different product; its ingredients are: water, seven gallons; loaf sugar, seven pounds; bruised ginger, half a pound; tartaric acid, two ounces; gum arabic, one-third of a pound; oil of lemon, one fluid drachm; yeast (brewer's), one-sixth of a pint. We are warned that latterly in the making of Ginger essence certain unscrupulous manufacturers, particularly in America, and Germany, have taken to the use of wood alcohol, a poisonous agent, which has a deadly effect upon the nervous centres. Mothers are in the habit of giving this "Essence of Jamaica Ginger" for griping pains in the belly to their children after eating unripe fruit, thereby doing the poor sufferers much more harm than if they had been left alone to fight the battle of passing colic.

Grantham Gingerbread, a white form of Ginger biscuit, is made especially at Grantham, Lincolnshire, and sold there particularly at Fair times. Forty or fifty years ago the brown Gingerbread displayed on stalls at village Feasts, and Fairs, was shaped into the figures of animals, and whimsical devices (sometimes coarsely significant), which were gilded over with Dutch metal. In *Tom Brown's School Days* Gingerbread of such sort was retailed at the stall of "Angel Heavens," sole vendor thereof, "whose booth groaned with kings, and queens, and elephants, and prancing steeds, all glaring with gold; there was more gold on Angel's cakes than there is ginger in those of this degenerate age." Gingerbread ("*Pain d'Epice*") has been in use at Paris since the fourteenth century. For "Gingerbread Nuts," which are handy, comforting, and slightly laxative, rub half a pound of butter into one and a half pounds of flour, with half a pound of brown sugar, and three-quarters of an ounce of fine ginger, powdered; mix well with ten ounces of dark treacle; make into a stiff paste, and cut into circular nuts with

a tin mould, or drop in buttons on a baking tin; bake in a moderate oven, and keep the nuts in an air-tight canister. "Parkin" is suitable at the light supper, or at the lunch, of a costive invalid. Take one pound of flour (and, if approved, one pound of medium oatmeal), two pounds of brown treacle, one pound of dark moist sugar, half a pound of butter, one ounce of ground ginger, the yolks of four fresh eggs (well beaten), and half a teaspoonful of powdered carbonate of soda; melt the treacle in a warm oven, rub the butter into the flour (with the oatmeal), mix all the other ingredients well together, and stir into the flour; pour into well-buttered baking tins (not more than an inch thick of the mixture into the tins), and bake very slowly in a cool oven for quite an hour, then cut into suitable squares. For the prevention of habitual constipation a simple sort of Gingerbread made with some fresh butter (and perhaps oatmeal, unless this disagrees) is effective. In Dame Deborah Bunting's *Book of Receipts* (1766) it is directed to "take half a pound of London treacle, two eggs beaten up, one pound of fresh butter (melted), half a pound of moist brown sugar, one and a half ounces of powdered ginger, which mix with as much flower (*sic*) as will roll it into a paste; roll it out, and cut it into whatever shapes you please; bake it into a slow oven; a little time does it."

Ginger tea was at one time a popular beverage. Coleridge had a weakness for this infusion, and advised it to his wife for their small son Hartley. He thought the boy would like it, and that it would help him to grow, the father declaring that a teaspoonful of Ginger piled up would make enough tea to last the child for two days, always half-filling the teacup with milk; he himself took Ginger mixed in his morning coffee, and a cup of Ginger tea in the afternoon. Similarly, "When feeling cold think of Ginger," quoth the immortal Jorrocks.

For "Mandarin Pudding," a wholesome stomachic dish, "mix a quarter of a pound of fine bread-crumbs, a quarter of a pound of finely-chopped suet, a quarter of a pound of Jamaica preserved Ginger, with two eggs, and two tablespoonfuls of syrup of Ginger; pour into a buttered mould, and steam for four hours."

GOAT.

Charles Lamb, in his Elia's Essay, *Grace before Meat*, has said: "During the early times of the world, and the hunter state of

man, when dinners were precarious things, and a full meal was something more than a common blessing, when a bellyfull was a windfall, and looked like a special providence, then in the shouts, and triumphal songs with which, after a season of sharp abstinence a lucky booty of goat's flesh (or deer's flesh) would naturally be ushered home, existed perhaps the germ of the modern "Grace before meat." This animal, the Goat (*Capra hircus*), long associated with medicine, and named *a carpendo*, from cropping, yields a milk "accounted cordiall against consumption: yea, its very stench is used for a perfume in Araby the Happy." The milk is richer in solids than that of the woman, the cow, or the ass, containing the largest proportion of cheese substance (casein), and the most fatty constituents, as well as salts, though it is comparatively poor in sugar of milk. It possesses *hircin*, r hircic acid, which has a peculiar smell, and taste. Goats' milk will often serve to check obstinate diarrhœa, whilst whey made therefrom helps to obviate scrofulous disease. This whey is the chief means of a cure carried out specially in well-known establishments of Germany, and the Tyrol. The whey is sweetish, balsamic, and agreeable, with a greenish tint, and consisting of sugar in solution with lactic acid, and with animal extractive matters, such as osmazome, and the like; also mineral salts are present, these being the chlorides of potassium, and sodium, sulphate of soda, and phosphate, and carbonate of lime. Help is given in the cure by the restorative atmospheric, and climatic influences which are brought locally to bear. It is essential that the whey shall be made from the milk of Goats which range, and browse on high mountains, particularly of Switzerland. In habitual torpor of the digestive organs, with constipation of the bowels, this whey-cure by Goats' milk effects admirable results, whilst in the scrofulous affections of children the benefits are simply wonderful.

At Naples there are no milk carts, but the cow is brought to the door, and milked on the spot to the quantity required. "*Passa la vacca*" is said by the customer on a blank day,—"Pass on! can't afford milk to-day;" which has become a homely proverb expressing far more than that, "the wolf (as well as the cow) is at the door." "Close behind come the Goats, and they, too, must be milked in sight of the purchasers, or how can it be sure that this milk is not watered." Upstairs climbs Nanny, if need be to the topmost storey, her owner professing

loudly his innocence of tricks; but under his ragged jacket he has a skin of water, with a tube extending down his sleeve. In Italy a kind of cream cheese (*ricotta*) is made from Goats' milk, and is sold in the streets, being much appreciated as sweet, and palatable. The vendors carry it on their heads like our muffin sellers, and retail it at so much a centime.

Sir Wm. Broadbent, writing about the prevention of pulmonary tuberculosis, says "it is interesting to note that asses, and Goats, do not suffer from this disease"; wherefore, adds Mrs. Earle in *Pot Pourri*, "it is a continual surprise to me that Goats are not kept for supplying their milk to the Consumptive Sanatoriums." Old Lord Chesterfield, in one of his famous letters to his son (London, March, 1759), wrote: "I am rather better than I was, which I owe, not to my physicians, but to an ass, and a cow, who nourish me, between them, very plentifully, and wholesomely; in the morning the ass is my nurse, at night the cow; and I have just now bought a milch goat, which is to graze, and to nurse me at Blackheath. I do not know what may come of this latter, and I am not without apprehensions that it may make a satyr of me; but should I find that obscene disposition growing upon me I will check it in time, for fear of endangering my life, and character, by rapes." Again, in another letter, from Italy, he records the fact that the Italian doctors had ordered for his lungs, then out of order, that he must drink asses' milk twice a day, and Goats' whey as often as he pleases, the oftener the better; whilst in his common diet they recommended an attention to pectorals, such as sago, barley, turnips, etc. In the Essay on *Witches and Night Fears*, Elia says: "Nor, when the wicked are expressly symbolised in Scripture by a Goat, was it so much to be wondered at that by our ancestors (whom we are too hasty to set down in the gross as fools) the devil was thought to come sometimes in the body of this animal, and assert his metaphor." It is a fact worthy of notice that where a goat is kept about a dwelling-place rats will not come.

Dr. Robert Hutchison tells us that Goats' milk, because stronger even than cows' milk, is unsuitable for the use of infants. One hundred parts contain four and a half of proteid solids. Whey procured from this milk ranks between aliments, and medicines, being of high value in the treatment of patients debilitated by organic disease of the stomach, or intestines. Paul Kruger, when among the Boers (as recently told in his Life,)

had his left thumb blown off by the bursting of his rifle when firing at a rhinoceros charging upon him, from which animal he then had to ride for his life. He doctored his hand roughly with turpentine, but everybody insisted it would have to come off. Kruger, however, flatly refused to lose his hand. "The two joints of what was once my thumb had gone, but it appeared that it would still be necessary to remove a piece of bone. I took my knife intending to perform the operation, but it was snatched away from me. A little later I got hold of another knife, and cut across the ball of the thumb, removing as much as was necessary; the worst bleeding was soon over, but the operation was a very painful one. I had no means by me of deadening the pain, and tried to persuade myself that the hand upon which I was performing this surgical operation belonged to somebody else. The wound healed very slowly. The women sprinkled finely-powdered sugar on it, and from time to time I had to remove the dead flesh with my pocket-knife; but gangrene set in after all. Different remedies were applied, but all seemed useless, for the black marks rose as far as the shoulder. Then they killed a goat, took out the stomach, and cut it open; and I put my hand into it while it was still warm. This Boer remedy succeeded, for when it came to the turn of the second goat my hand was already easier, and the danger much less. The wound took over six months to heal, and before it was quite closed I was out hunting again." Goats' milk is found to be far less subject to germs than cows' milk; it has wonderful nutritive properties, and will sometimes rescue infants, and invalids, as a last resource in diet. "The Indians," says *Antient Cymric Medicine*, "are treated by their native doctors for asthma in a remarkable way. Ghee prepared with Goats' milk is given to the patient internally, and a Goat is brought into the sick person's room three times a day. The patient is directed to make use of the animal as a pillow, and to hug it during his paroxysms of difficult breathing, then inhaling the strong scent of the beast; and the sick man will within a short while become cured of his complaint." From the days of Moses the Goat has been accredited with a certain virtue as the carrier away of what is evil. Originally, according to the old Jewish ritual, on the great day of atonement the sins of the people were symbolically laid on the head of a Goat, which was afterwards turned out into the wilderness.

GOOSE.

"THE flesh of Goose (*Anser*)," declared *The London Pharmacopœia* (1696), "is exceedingly hard of digestion, but being digested nourishes well; the liver is of great nutriment; the grease is exceeding hot, and of thin parts, piercing, and dissolving." Goose-grease (*Adeps anseris*) got from a roasted Goose is highly emollient, and very useful in clysters; this readily proves emetic. It is chiefly, however, to the liver of Geese artificially fattened for its adipose enlargement (this liver being mixed by foreign confectioners with truffles, and various condiments) regard may be had for helping patients who are atrophied, and wasted. Constant heat, and deprivation from water, or exercise, develop enormously the fatness, and size of the Goose liver, it being a curious fact that charcoal powder helps materially towards producing this excessive growth of the said liver in size. At Alsace a trough of water, in which pieces of wood charcoal remain to steep, is placed in front of the Geese under treatment. Liebig taught that charcoal powder will so hypertrophize the Goose's liver as to cause finally the death of the bird; by this fatty degeneration the liver becomes surcharged with a phosphoric oil. Geese livers in patés, and in terrines, with truffles, are now consumed all over Europe. When the birds are considered ripe enough of liver enlargement, they are killed, and the livers are taken to the truffling house. Meantime the carcases, shrivelled out of all knowledge, are sold for about one shilling apiece to the peasants, who make soup of them. The next step is to take each liver (from two to three pounds in weight), and to lard it with truffles, half a pound of truffles to a pound of liver; then to convey it to an icehouse, where it must remain on a marble slab for a week so that the truffle-perfume may thoroughly permeate its structure. At the end of a week each liver, being removed, is cut into the size required for the pot which it is to fill, and introduced into that pot between two thin layers of mincemeat made of the finest veal, and bacon fat, both truffled with the liver itself; and one inch depth of the whitest lard is then spread over the whole so that none of the savour may escape in baking, which process takes about five hours, the fire being carefully regulated. Nothing remains afterwards but to pack the dainty, either in earthenware, wood, or tin. With the livers of Ferrara Geese fattened to excess,

"exquisite as the food was, did Heliogabalus" (as Smollett relates, in *Peregrine Pickle*) "regale his hounds." Macaulay has said in his essay about Horace Walpole: "His writings rank as high among the delicacies of intellectual epicures as the Strasburg pies among the dishes described in the *Almanach des Gourmands*. But as the *Paté de foie gras* owes its excellence to the diseases of the wretched animal which furnishes it, and would be good for nothing if it were not made of livers præternaturally swollen, so none but an unhealthy, and disorganized mind could have produced such literary luxuries as the works of Walpole."

The Truffle (*Tuber cibarium*) is an edible tuber, of subterranean growth, found in the earth, especially beneath beech trees, and uprooted by dogs trained for the purpose; "the tubers have a heavy, rank, hercline smell, are of a chestnut colour, and are discovered not seldom in England." The most famous field for the production of Truffles is the old Province of Perigord in France, these having a dark skin, and smelling of violets. Piedmontese Truffles suggest garlic; those of Burgundy are a little resinous; the Neapolitan specimens are redolent of sulphur; and in the Gard department (France) they have an odour of musk. When once dug up Truffles soon lose their perfume, and aroma; therefore they are imported bedded in the very earth which produced them. At the sight of Truffles, or even the hearing their name, a proper French gastronomer is expected to go into ecstasies of delight, and admiration; he knows them as the *sacrum sacrorum* of epicures, the diamonds of the kitchen, and by other hyperbolical names. According to Dumas, the Truffle says, "Eat me, and adore God." The author of the *Physiology of Taste* ascribes to these tubers such effects as that "they awaken amatory recollections, and, without being positively sexual excitants, they will under certain conditions make women more loving, and men more amiable." Besides the fragrant principles which distinguish its several kinds, the Truffle contains cellulose, glucose, pectose, gum, and water; in its ash phosphoric acid, and potash prevail, whilst a very little sulphuric acid may also be detected. The name "Truffle" is derived from the Italian "Tartufolo," signifying he who hides, or disguises himself. Truffles are in season from November to March. They are found under oak trees, the range of their area for growth being strictly limited to the area covered by the branches.

Two French epicures, not being satisfied with the flavour given to the turkey by its stuffing of Truffles for the table, determined to try whether this Truffle flavour might not be imparted to the bird by a suitable system of diet. They selected a fat young turkey, and fed it for two months with the most exquisite Truffles that the South of France could produce ; and the turkey seemed to enjoy the experiment. At the end of two months the bird was killed, roasted with delicate care, and brought upon the table. Each of the experimenters eagerly took a wing, and found to his disappointment that the turkey had absolutely no Truffle flavour whatever. It was thus proved that a diet of volatile fragrance does not impart its special flavours to an animal kept living on such diet for a length of time. Evelyn, in his *Diary* (September 30th, 1644), wrote about "a dish of Trufles, which is a certaine earth-nut found out by an hogg train'd to it, and for which these animals are sold at a greate price." Samuel Boyse (whose poem on the Deity is quoted with high praise by Feilding) was an improvident writer always in want of money. Dr. Johnson generously exerted himself to collect by sixpences a sufficient sum for getting Boyse's clothes out of pawn. But two days afterwards Boyse had spent this money in some self-indulgence, and was found in bed, covered only with a blanket, through two holes in which blanket he passed his arms so as to write. It appears that when thus impoverished he would lay out his last half-guinea to buy Truffles, and mushrooms, for eating with his scrap-end of beef.

Mahometans, and Jews who abjure the use of lard, find in countries where butter is scarce a substitute for it in Goose-fat, clarified, and made excellent of taste. Goose oil has long been a popular remedy of sovereign use externally for croup, or a swollen throat. The whimsical version of "Old Father William," by Alice, to the Caterpillar, *in Wonderland*, runs thus :—

"'You are old,' said the youth, 'and your jaws are too weak
For anything tougher than suet ;
Yet you finished the goose, with the bones, and the beak ;
Pray, how did you manage to do it ?'

"'In my youth,' said his father, 'I took to the law,
And argued each case with my wife ;
And the muscular strength which it gave to my jaw,
Has lasted the rest of my life.'"

To prevent indigestion from the richness of a Goose, after

cleaning, and trussing it for roasting, rub it all over (inside and out) with coarse kitchen salt; then put into the bird's inside two large handfuls of salt; get a basket woven loosely enough at its bottom to let the salt drop through into a pan put underneath; hang up the bird thus prepared in a cool place over the pan to catch the salt, and let it remain like this for three days; then before cooking wash the Goose thoroughly from the salt, and all the coarse, fatty material comes away in the water, whilst the bird's flesh will prove as tender, and delicate as that of a turkey. The male Goose is known as a Gander (and a "Goosey Gander" means a blockhead); young Geese are Goslings, which are called green Geese until about four months old; these were formerly eaten with raisin, or crab-apple sauce. Kate Wiggin, in her *Diary of a Goose-girl*, recounts certain characteristics of the bird. "As to going to roost, ducks, and Geese, unlike hens, whose intelligence prompts them to go to bed at a virtuous hour of their own accord, have to be practically assisted, or, I believe, they would roam the streets until morning. Never did small boy detest, or resist being carried off to his nursery as these dullards. young and old, detest, and resist being borne off to theirs."

"An ortolan is good to eat,
A partridge is of use;
But these are scarce, whereas you meet
At Paris, ay! in every street,
A goose!"

And yet, as saith an old proverb, "A Goosequill (pen) may be more dangerous than a lion's claw;" though "*le moineau en la main vaut mieux que l'oie qui vole.*" "A sparrow in the hand is worth more than a goose on the wing."

During the days of middle England, Goose was eaten pickled with cloves, and ginger. The fowl is rich in fat. "This fat," as Lemery taught (1674), "eases the piles; and those parts of the body which are troubled by rheumatism should be rubbed therewith." As is commonly known, sage and onions are the usual condiments for stuffing a Goose. That the use of apple-sauce with roast Goose is an old custom can be proved by a reference to Shakespeare's *Romeo and Juliet*: "Thy wit is a very bitter sweeting" (*i.e.*, a sweet apple) "it is a most sharp sauce, and is it not well served with a sweet Goose?" In the fourteenth century a Goose was often stuffed by Italian cooks

with garlic, and quinces. The Germans fill this bird with apples, and chestnuts, and serve it with red cabbage. On July 3rd, Lord's-day (1664), Pepys, as his *Diary* tells, "went to dinner where the remains of yesterday's venison, and a couple of brave green Geese, we were fain to eat alone, because they will not keep, which troubled us." For a vegetarian dish, "Savoury Goose," soak half a pound of brown haricot beans for six or eight hours, boil them till tender, and rub through a wire sieve; peel, and chop coarsely three onions, and fry these in butter; mix together the beans, and onions, and add half a pound of bread-crumbs, two ounces of butter, two tablespoonfuls of finely-chopped sage, four raw eggs beaten up, and salt, and pepper to taste. Grease a basin, and pour in the mixture, cover with buttered paper, and steam for two hours; turn it out, and allow it to become cold, and to set. Flour a board, and cut into slices of two fingers' breadth, and an inch thick; dip each into beaten-up egg, sprinkle all the sides with finely-crushed brown bread-crumbs, and fry a golden brown. Serve with brown gravy (made with fried onion, lemon-juice, brown sugar, cornflour, and water, boiled together), and apple-sauce.

Gastronomers pronounce a March Goose insipid, and a Michaelmas Goose rank. The Hebrews are said to eat more Geese than any other class of persons. "Three women and a Goose" are supposed to make a market. We have a proverb "As wise as a Goose;" and it is a matter of history that Geese saved the Roman capital. Saint Martin's Day, November 11th, when a second little summer is proverbial, stands denoted in old almanacks by the sign of the Goose. "Whom all people worshippeth with roasted Goose, and wine." The quaint Nursery Rhyme with its subtle religious significance, is familiar to us all:—

"Goosey, goosey, gander,
Whither shall I wander?
Upstairs, and downstairs, and to my lady's chamber.
There I met an old man
Who wouldn't say his prayers,
I took him by the left leg,
And threw him down the stairs."

GRAPES.

The principal virtue of grapes is contained in their sugar, which differs chemically from cane sugar, and passes more quickly into

the bodily system, with speedy combustion as a food. The amount of this grape sugar varies according to the greater or less warmth of the climate in which the different grapes are grown. Tokay grapes are the sweetest; next are those of Southern France; then of Moselle, Bohemia, and Heidelberg, whilst the fruit of the vine in Spain, Italy, and Madeira, is not so well adapted for curative purposes. The grape fruit consists of pulp, stones, and skin. Within the pulp is contained the grape sugar, together with a certain quantity of fruit sugar, which is identical with cane sugar. The grape sugar warms (and fattens) speedily, being taken up straightway into the circulation without waiting to be changed slowly by the saliva; therefore this grape sugar serves to repair the waste of burning fever quickly, and to recruit the strength promptly when thereby consumed, grapes being at such times most grateful to the sufferer. But for the same reason they do not suit inflammatory, or gouty persons under ordinary circumstances, as well as foods sweetened with cane sugar which has to undergo slower chemical conversion into heat, and sustenance. The chief ingredients of grape fruit are tannin, gum, bitartrate of potash, sulphate of potash, tartrate of lime, magnesia, alum, iron, chlorides of potassium, and sodium, tartaric, citric, racemic, and malic acids, some albumin, and azotized matters, with water. Grapes can supply but little nutritious matter for building up the solid structures of the body. Sweet grapes act as gentle laxatives, though the stones, if crushed are astringent. When taken in any quantity grapes act freely on the kidneys, and promote a flow of urine. The acids of the fruit are burnt off from their alkaline bases which remain behind, and help to neutralise such other gouty acids as they may encounter. But for a person in good health, and with sound digestion, grapes are excellent to furnish bodily warmth by their ready-made sugar, whilst the essential flavours of the aromatic fruit are cordial and refreshing.

Besides being useful against gout by its alkaline base, the bitartrate of Potash salt (cream of tartar) in grapes proves of remedial use for other affections. It is reputed to have been of signal curative service in, or against small-pox. Mr. Rose, of Dorking, first gave it in 1826, and with remarkable success, losing only one case in over a thousand, and that one complicated with whooping cough. Likewise the son, Mr. Charles Rose, later on gave the remedy against small-pox with equally

satisfactory effects. In 1863 it was tried by the authorities of the Highgate Small-pox Hospital, with the result that they reported "it does not seem to do the least good." Yet during the same time it was being given at Dorking with a result that the mortality there among unvaccinated patients was only 11 per cent as against 47 in the Highgate Small-pox Hospital. The usual mixture was a quarter of an ounce of the bitartrate of potash to a pint of water, taking a wineglassful of this at frequent intervals. Later on the same remedy was supplied in the form of whey; half, or three-quarters of an ounce of cream of tartar being administered in half a pint of hot, almost boiling milk. Mr. Rose came to the conclusion that this was essential in some cases, which the other form of the potash salt taken with Turkey Rhubarb, failed to benefit. "I am willing," wrote Edward Hume to the *Liverpool Mercury*, 1875, "to forfeit my reputation as a public man if the worst cases of small-pox cannot be cured in three days simply by the use of an ounce of cream of tartar dissolved in a pint of water, and drunk at intervals, when cold, as a certain never-failing remedy. It has cured thousands, never leaves a mark, never causes blindness, and avoids tedious lingering illness."

A limited diet of sweet grapes taken almost exclusively will sometimes work wonders for the feeble digestive powers of persons rendered weak and bloodless by over-work, or worry; to eat a grape each minute for an hour at a time, three or four times in the day, while taking very little else beyond dry bread, will often prove highly beneficial in such cases.

What is known as the Grape Cure is pursued in the Tyrol, Bavaria, on the banks of the Rhine, and elsewhere, with two objects in view according to the respective class of patients. Those weakly bloodless persons who are labouring under wasting disease, as in chronic catarrh of the lungs, requiring quick supplies of animal warmth, and adipose repair, gain special help from sweet ripe grapes, being ordered to take these almost exclusively, from three to six pounds a day. On the other hand, sufferers from torpid biliary functions, sluggish liver, or passive local congestions, benefit rather by taking the grapes not fully ripe, and not sweet, in moderate allowance; these latter grapes have a diuretic, and somewhat laxative effect, being eaten four or five times a day during the promenade; their reaction is alkaline, as aforesaid, therefore suitable for persons troubled with gravel, or acid gout.

For consumptive persons the ripe, luscious, sweet grapes, besides affording an exceptionally large quantity of warming, fattening glucose (*i.e.* grape sugar), specifically stimulate the lung substance to healthier action, and help it to throw off effete matters by thus encouraging the formation of new tissue. During the grape cure the fruit if taken on an empty stomach would act as a laxative: so that eating them does not begin until after breakfast. A hundred pounds weight of ripe, sweet grapes include within their pulp as much as thirteen pounds, full weight, of the purest glucose; and because of this abundance the said glucose has received, wherever obtained, the comprehensive name of grape sugar. Furthermore, the tartaric acid which sweet grapes contain plentifully is the basis of several so-called "blood-purifying" medicines. Neuralgia and the sleeplessness of debility may be materially improved by the sweet grape cure, because nutrition is thereby stimulated, and the needful quality of good blood restored.

"Some of the credit," says Dr. Hutchison. "of the results attained must be put down to the circumstances under which the grape cure is carried out; seeing that the patient is expected to gather the grapes for himself, the doing which entails a certain amount of exercise in the open fresh air. Consumptive patients are sent to the Gironde for the purpose of breathing-in the vapour from the wine vats whilst the grape juice is fermenting, this proving to be highly beneficial as a restorative for weakly and delicate young persons. The wine-vapour in this district is more stimulating, and more curative than in Burgundy. Young girls who suffer from atrophy are at first made to remain for some hours daily in the sheds whilst the wine-pressing is going forward. After a time, as they become less weak, they are directed to jump into the wine press, where they skip about and inhale the fumes of the fermenting juice, until they sometimes become intoxicated thereby, and even senseless. But this effect subsides after two or three trials, and presently the girls return to their homes, and work, with renewed strength and heightened colour, hopeful, joyous, and robust." A stranger on his first visit to the Bodegas. or wine vaults of Southern Spain experiences a decided sense of exhilaration, with quickening of the pulse, this being followed presently by a narcotic effect, with a feeling of languor and headache. According to an authoritative examination (*Lancet*) made of the distillery air it appeared that no less than an ounce

of absolute alcohol may be present in five cubic feet of the air. From which result it is obvious that a very appreciable amount of alcohol would be inhaled during a stay, say of eight hours, in such air; and since the alcohol by the medium of the lungs would rapidly get into the general circulation, it cannot but be concluded that such air would in the long run produce in persons habitually respiring it the well known pernicious effects of alcoholic excesses. Nevertheless, short systematized dosings with such alcoholized air, modified in degree, and properly regulated, may be curatively prescribed with safe benefit. The vats of the famous Chateau D'Yquem have effected the most wonderful cures on this principle, even in cases considered to be past human aid. Perhaps a modified pursuance of the inhaling process just described might be carried out for suitable cases at our leading home breweries? The fresh sap of the vine (*lacryma*, a tear) is an excellent application to weak eyes, because of its tannin in the juices, also for corneal specks.

The large family of Muscat grapes get their distinctive title, not because of any flavour of musk attached to them, but because the luscious berries are particularly attractive to flies (*muscæ*). "*On attrape plus de mouches avec le miel qu 'avec le vinaigre,*" says a pithy French proverb. Sometimes when eaten to excess grapes cause soreness of the tongue, and within the mouth, resembling the symptoms of thrush. and honey will act in like manner. The sweet grape cure is highly to be commended for persons threatened with consumptive mischief in the lungs, because of the abundant sugar and the potash salts supplied in the fruit. But children as a rule do not bear the grape cure satisfactorily. Other fruits, it has been aptly said, "May please the palate equally well, but it is the proud prerogative of the kingly grape to minister also to the mind."

Grape sugar as such may be used with benefit for sweetening the drinks of patients in fevers, or to mix with their light farinaceous foods. Recipes for grape juice in bottle, for grape jelly, grape sauce, and grape jam ("raisiné") are given fully in *Kitchen Physic.* The best grapes wherewith to make grape juice for keeping in bottles are of the purple kind. For another "grape jam," as made at the Cape, South Africa, take four pounds of the fresh fruit, and one pound of sugar. Carefully pick the grapes from the bunches, and prick them with a steel, or gold pin. Boil a syrup of the sugar, and put the grapes into

the syrup whilst boiling. Some sliced apple, or quince, may be added to the grapes; for every pound of the same, one pound again of sugar; also some orange peel cut up may be introduced. Boil rather quickly at first. Take out some of the jam, and put it in a shallow saucer to cool, so as to see if it will jelly properly.

It is well worthy of remark with respect to grape juice, that whilst it exercises when freshly obtained an inhibiting effect, more or less, in typhoid fever on the growth and vitality of the typhoid bacillus, as likewise on the colon bacilli which are the cause of many forms of acute intestinal ailments, yet the bottled grape juice found in grocery stores gives the most conclusive experimental results. It should be observed, there is a marked difference between the brands of this bottled grape juice. Experimentally certain brands have been found to kill the bacilli by the end of a minute, such effect being almost instantaneous. Moreover the quantity of grape juice required for securing this vital object does not disturb the digestion, as lemon juice (also destructive to the bacilli) might do. It was found that the recently expressed grape juice, prepared in the laboratory, had no effect on the bacilli, even in the proportion as high as 100 per cent. American physicians declare that unfermented grape juice, not artificially preserved by mischievous salicylic acid, etc., is a grand food for the sick, particularly in fever cases. Dr. Foster, of Chicago, reported in the *Medical Era*, 1886, "grape juice has done me this one inestimable service: it has given me a food, *the only food*, which little ones when endangered by wasting and febrile diseases, can, or will take, whilst the temperature remains high, and the pulse quick." "When I had found a food of which a boy four years old would drink one and a half pints daily, and ask for more, while he would absolutely refuse all other food, I had discovered a means whereby his strength could be maintained throughout ten days during a raging scarlet fever, and that food saved my little patient's life." Still more important has this advice become to-day. Grape juice (easily sterilized by a simple, harmless process) is highly beneficial in all forms of low wasting disease.

Grapes are sometimes employed systematically as a means of cure for continued diarrhœa: the grape sugar is partly absorbed into the system unchanged, and whilst rich in silicates, phosphates, tartrates, and pectin. The skins afford some aromatic ethereal oils, and the stones a good deal of tannin; the grape

sugar becomes partly converted into lactic acid. In the Song of Solomon occurs the pleasant passage, "the fig tree putteth forth her green figs, and the vines with the tender grapes give a good smell: Arise. my love, my fair one, and come away."

With respect to table scraps for the poor (*Epicure*, 1898), "a little ingenuity may often render these tempting, and appetising. Half a bunch of grapes, and a couple of spoonfuls of jelly (lemon, or wine) left from dinner, do not by themselves look particularly attractive, one has to admit; but just melt the jelly, and set the grapes therein, using a small pudding basin, or brawn basin, as a mould, and see how glad some sick child will be of the morsel, though your servants would probably disdain to touch it. Verily the poor may easily be fed with the crumbs which fall from rich men's tables, did the rich only know how to utilize such crumbs. There are stalls at some of the Paris markets where may be seen portions of foods laid out, the relics of dainty dinners from restaurants, and large households: a morsel of fish, a simple cutlet, a spoonful of *bavaroise*, all disposed neatly together as one of such portions, to be sold for a few sous, under the name of an 'arlequin.' These scraps in England go to help fill the hog-tub, or into the dust-hole, because no one has taken the trouble to teach the English cook how she should put away her '*beaux-restes*' tidily."

In countries where the fruit can be successfully dried certain kinds of grapes are converted into raisins, always specially associated with Christmas time. To quote again the Song of Solomon, when the Bride feeling faint cries out, "Stay me with 'ashishah,' comfort me with apples," the genuine sense of this Hebrew word is "raisin-cakes," as long familiar to scholars; and now the revised version puts it, "Stay ye me with raisins, comfort me with apples."

Muscatels are known as "raisins of the sun," because left upon the tree to dry in the sunshine before being gathered. Grapes can be better cured and dried, because of local conditions, in certain parts of Spain than elsewhere, especially near Malaga. The Valentia, or pudding raisins, are likewise imported from Spain. Sultanas, which are destitute of stones, or seeds, are received from Smyrna. "Surpassing even the banana in nutritive value (Dr. Hutchison) is the group of dried fruits which includes the raisin, and the date." Raisin-tea is found to be of the same proteid value as milk, and much more easily

digested, therefore of superior use in many cases of gastric disease where milk or soups (vegetable or animal) must be disallowed. "Take half a pound of good raisins, and wash them well in cold water. Cut them up roughly to free the pulp in cooking, and put them into a stewing jar with one quart of cold water. Cook for from three to four hours, when the liquid will be reduced to one pint. Press all but the insoluble skins, and stones, through a fine scalded sieve, and use the tea either hot, or cold; if too sweet a little lemon juice may be added." But the tea is scarcely to be advised for meat eaters, as its sweetness might induce biliousness. For persons who suffer from coldness of the feet, and hands, it is very warming and cherishing. Also stewed sultana raisins are restorative when fatigue of body and mind are felt, being at the same time mildly laxative. Wash and pick one pound of sultanas, soak them all night in cold water; next morning drain off the water, and put the raisins into a pan, or basin, and barely cover them with water, add a little grated lemon peel, put a plate over the top, and stew them in the oven till quite tender, and soft. Some of these, hot or cold, with a slice of whole-meal bread, or brown bread, will make a very sustaining repast. Dried raisins contain $2\frac{1}{2}$ per cent of proteid substance, $74\frac{1}{2}$ of heat-forming parts (carbohydrates), 4 of salts, and 19 of water. The German doctors used to keep their patients whilst under the grape cure almost entirely without other food, but now some suitable light nourishment is also allowed, at regular times, and even a moderate quantity of Bordeaux wine.

The sap of the vine is used commonly in Italy for strengthening, and improving the hair, increasing and renewing its growth even when it has taken to fall out considerably. In the Spring when the vines are pruned, a fluid percolates out from the cut boughs, which the peasants are careful to collect in little tin pots, some time being needed to gather the juice as it oozes out by drops. When sufficient has been obtained it is strained through muslin, though some of the fibrous substance must be also kept in hand, as it helps to do good. Practically the same process may be adopted in this country by persons who possess vineries. The liquid will keep sweet, and useful for six or eight months, and even then it only acquires a sharp odour which is not unwholesome. One sort of grape, the Bourdelas, or Vergus, being intensely sour when green is never allowed to ripen, but its large berries are made to yield their acid liquor for use instead of

vinegar, or lemon juice, in drinks, medicines, and sauces. The human stomach will tolerate acids which are comparatively strong, even of a mineral sort, and these not presently becoming alkaline as the vegetable acids do by chemical change. Drs. Gould and Pyle record a case (*Curiosities of Medicine*, 1901) of "a bootmaker who constantly took half an ounce of strong sulphuric acid (oil of vitriol) in a tumbler of water, saying that it relieved his dyspepsia, and kept his bowels open"; of course this was a most exceptional immunity, and a strange power of resistance.

GRUEL.

In primitive Britain the cereal, and leguminous foods were originally eaten unshelled, and uncooked, as testified by the extremely ground-down state of our early ancestors' teeth, and those of the pre-Saxon inhabitants. But meanwhile in more civilized Gaul these foods were advanced to the state of being pounded by stones, and in mortars, so as to make a sort of mass with water, or milk,—the primitive Gruel. "Rome," said Cato of Utica, "was raised upon Gruel." Later on in mid-English times Gruel was groat ale, or oatmeal soup, made with malt liquor instead of water, and then rendered in base Latin *gruellum*, from grutellum, a diminutive of *grutum*, meal; so oatmeal, grits, groats. Grout, similarly, was a quondam Danish dish, and it is still claimed as an honour by a certain old Danish family to carry a platter thereof at a Royal Coronation :—

> "King Hardyknute, midst Danes, and Saxons stout,
> Caroused on nut-brown ale, and dined on grout,
> Which dish its pristine honour still retains,
> And when each prince is crowned in splendour reigns."
>
> *Art of Cookery* (1708).

Again, the *True Gentlewoman's Delight* (1653) taught how "to make Grout": "Take some wheat, and beanes, and when you have made it into malt, then tittle it; then take some water, or some small wort, and heat it scalding hot, and put it into a pail; then stir in the malt; then take a piece of sower leaven; then stir it about, and cover it, and let it stand till it will cream, then put in some orange pills (peels ?), then put it over the fire, and boil it, keeping it stirring till all the white be gone." Nowadays Gruel is an invalid preparation for weakly persons of

disabled digestion, or to obviate a recent cold, and promote free action of the skin, or for infants. It is made by boiling meal, or groats, or other farinaceous substance, in water. If nicely sweetened with treacle, and taken immediately before going to bed, Gruel is an admirable little repast for anyone troubled with a cold in the chest, or head. Or, it may be seasoned with salt, pepper, spices, herbs, celery seed, shalots, or onions. A good Gruel for bowel complaints is to be made with a spoonful of ground rice mixed with a pint of milk, and boiled, some cinnamon being added, and perhaps Port wine, or Brandy. "Plain Gruel," quoth Dr. Kitchener, "is the most comforting soother of an irritable stomach we know of." "Water Gruel is the king of spoon-meats, the queen of soups, and gratifies nature beyond all others. This essence of oatmeal makes a noble, and exhilarating meal." Sir Kenelm Digby wrote in his *Closet opened* (1645) about "Water-gruel"; "This should be boiled till it rises in great ebullition, in great galloping waters; when the upper surface hath no gross visible oatmeal in it, this should be then skimmed off, and it will be found much better than the part which remaineth below of the oatmeal. Yet even that will make good Water-gruel for the servants." Groats is the grain of oats freed from its husk, and when crushed forms "Embden Groats," as used for making gruel. Likewise barley, arrowroot, and flour, or biscuit, will serve for preparing this food. Any Gruel should be drunk slowly, so that the starch may become mixed with saliva, and thus partially digested before being swallowed. For "a pleasant Gruel," "take a small cupful of good wheaten bran, and mix this with a little cold water; then stir in two quarts of boiling water into which a bruised stick of cinnamon has been put; let it boil for half an hour till sufficiently thick; strain, and when the Gruel is to be served add a teaspoonful of lemon, or orange juice, and as much sugar as is liked." But in the making of Gruel sugar is mentioned with hesitation, for "a sweet Gruel is an abomination," says the *Century Invalid Cookery Book.* And yet a Gruel containing just a little sugar has a pleasanter flavour than one without any. It should be noted that the starch of such grain as is used in preparing Gruel is not readily digested unless it be well cooked. When dear old Mr. Woodhouse, the kindly valetudinarian paterfamilias, in Jane Austen's *Emma,* was visited by his married daughter, and her husband, he bade her "go

to bed early, as she must be tired; and," said he, "I recommend to you a little Gruel before you go; you and I will have a nice basin of Gruel together. My dear Emma" (the elder daughter), "suppose we all have a little Gruel together!" "Thin Gruel," writes Austin Dobson in a certain Preface, "once moved a noble Earl to poetry for a contemporary keepsake." Derisively in some of the casual wards of the London workhouses the Gruel given to able-bodied paupers passes under the name of "Skilly," a word perhaps first derived from the skillet (Latin, *Scutella*, a small dish, or plate), which vessel was formerly used in heating a drink over the fire. From the same word *Scutella* our scullery, or dishery, is obtained; hence also a scullion, a dish-washer. In Lear's *Book of Nonsense*, so beloved by children, they gain acquaintance with an odd dish of the food under notice :—

> "*There was an old person of Ewell*
> Who chiefly subsisted on gruel.
> But to make it more nice he inserted some mice,
> Which refreshed that old person of Ewell."

Oatmeal Gruel may be made by boiling from one to two ounces of the meal with three pints of water, down to two pints, then straining the decoction, and pouring off the thinner liquid when cool. Its flavour can be improved by adding split raisins towards the end of boiling, or sugar, and nutmeg (grated). To "get one's gruel" is a slang term for being severely punished, or disabled, or slain, perhaps deservedly. "He shall have his gruel, said one." (*Guy Mannering*, Cap. xxvii).

HARE *(See* GAME.*)*

A PROVERB of our sagacious sires has taught that "He who would have a Hare for breakfast must hunt overnight."

HEDGEHOG.

FAMILIAR in country districts *throughout* England is the Hedgehog, Hedgepig, or Urchin, a small animal armed with prickly spines, being of nocturnal habits, feeding by night on insects, and such prey, and sleeping by day under dead leaves, or similar herbage. When captured, and domesticated, the Hedgehog will clear the kitchen of beetles, cockroaches, mice,

and even rats. In the *London Pharmacopœia* (1696) it was stated: "The flesh roasted makes pleasant meat; its ashes cure dropsies, as well as the bed-wetting, or not holding the water." Gypsies have an excellent way of roasting the delicate little "Hotchi-witchi" in a ball of clay, which is a slow conductor of the fire, and defends the small creature's body from unsavoury products of charring, whilst the fat, and the gravy which ooze out assist, the cooking within the clay. Hedgehog pie is a dish which is much relished on the continent. For deafness in the head, several old medical authors advise to take the drippings from a roast Hedgehog, and put the same to the patient's ears so grieved, and stop them with black wool. Quite recently the *Tramp's Handbook* (1903) instructs that "from September to January is the season for Hedgehogs, when nice and fat, especially at Michaelmas when they have been eating the crab-apples which fall from the hedges. Some have yellow fat, and some have white fat, so that we calls 'em mutton, and beef Hedgehogs; and very good eating they be, sir, when the fat is on 'em." A second recipe for cooking these small creatures of the hedgerow, or plantation, is thus explained: "You cut the bristles off 'em (after they have been fust killed) with a sharp knife; then you sweals 'em (burn them with straw like a bacon pig), and makes the rind brown; then you cuts 'em down the back, and spits 'em on a bit of stick pointed at both ends, and then you roasts 'em with a strong flare." The little animal should first be despatched by a blow on the head, and then roasted just as caught; when it is done the bristles, and skin, will come off *en bloc*, and he is found to be juicy, and full of most delicate flavour. In France the Marquis de Cherville tells how the foresters on his estate are given to concoct a delicious stew made of the Hedgehog, and the Morille (*Fungus meruleus*), a choice mushroom gathered in the woods. In ancient times the Greeks ate Hedgehogs' flesh (*Erinaceus Europæus*).

HERBS.

Besides those edible Herbs which come under notice here *seriatim*, there are several others which may be considered collectively, with a more brief, though sufficient, description. These are commonly used, or of cultivation for the kitchen, whilst likewise embodying curative principles for culinary

development as foods. John Swann, in his *Speculum Mundi* (1643), swore by "herbs, hot, and drie, or herbs moist, and cold: herbs of more than ordinairie properties."

> "Good Lord, how many gaping souls have scap't
> By th' aid of herbs, for whom the grave have gap't.
> 'Tis not alone their liquor inlie ta'ne,
> That oft defends us from so many a bane,
> But ev'n their savour, yea, their neighbourhood,
> For some diseases, is exceeding good."

Valentine, in the Dedication to his *Liber Simplicium* (Sixteenth Century), bore like witness.

> "Herbis, non verbis curo; sincerus in omni
> Curandi methodo, quem mea praxis habet."
>
> "By worts, not words, I cure—honest in all my ways."

As to certain herbs administered for the relief, or cure of ailments due to a deficiency of energies, or physical atoms, on the hypothesis of such herbs possessing correlative energies, and atoms, it must be remembered that a plant to be in perfect usefulness must find its elective essential elements in the soil producing it; the amount thereof may be exceedingly small, but that amount is all-essential to its health, life, and virtues. The very slightest secular changes are the occasion, or causes of the greatest operations in nature; and the human body is equally subject to parallel laws. The growth of herbs, and plants, is influenced by the moon, as well as by the sun. Shakespeare recognized this when writing (in *Troilus and Cressida*) "As true as steel, *as plantage to the moon*, as sun to day;" which allusion is explained in the *Discourse of Witchcraft:* "The poor husbandman perceiveth that the increase of the moon maketh plants fruitful." Nor need the outdoor wayfarer in search of health-giving medicaments be ever dependent altogether on any kitchen garden for green stuff, and fruits. The hedgerow, and woodland, the cliffside, and riverside, the meadow, and heath, will furnish blackberries, hips, barberries, dewberries, whortleberries, samphire, seakail, wild chicory, sorrel, dandelion leaves, nettles, watercress, and, of course, mushrooms, as well as the many other edible fungi now neglected through sheer ignorance.

> "Poscas tandem æger: si sanus negligis herbas,
> Esse cibus nequeunt: at medicamenta erunt."
>
> "In health, if sallet herbs you won't endure,
> Sick, you'll desire them, or for food, or cure."
>
> EVELYN (*Acetaria*).

Saith John Swann again in *Speculum Mundi*: "First, concerning Herbs, I begin with Basil, whose seeds, being mixed with shoemakers' black, do take away warts. We in England, though we seldom eat it, yet greatly do esteem it because it smelleth sweet, and comforteth the brain. But know that weak brains are rather hindered than holpen by it; for the savour is strong, and therefore much smelled into procureth the headach; and hath a strong propertie beyond all these, for a certain Italian, by often smelling the Basil, had a scorpion bred in his brain, and after vehement, and long pain he died thereof. I pray thee, gentle reader, bear in mind this tragic tale, and have a care lest thou, through over-indulgence in one sweet smell, should turn thy brain into the unwilling hostelry of a too lively scorpion! Be discreet in thy generation, and, setting on one side the pot of treacherous Basil, gather to thyself great armsful of never-dying Borage (called also the 'Cucumber herb')." The herb Basil (*Ocymum basilicum*) is often used in cookery, especially by the French; it grows commonly with us in the kitchen garden, but dies down every year, so that the seeds have to be sown annually. The leaves, when slightly bruised, exhale a delightful odour; they gave the distinctive flavour to the original Fetter Lane sausages. The herb furnishes a volatile, aromatic, camphoraceous oil, and on this account it is much employed in France for flavouring soups, especially mock turtle, and sauces. Dr. Kitchener tells, as a useful secret, the value of adding a table-spoonful of Basil vinegar to the tureen of mock turtle soup; "this the makers thereof will thank us for teaching." "Basil," says Evelyn, "imparts a grateful taste to sallets, if not too strong, but is somewhat offensive to the eyes." This sweet herb has been immortalized by Keats in his tender, pathetic poem of *Isabella and the Pot of Basil*, founded on a story from Boccaccio. George Eliot, in *Middlemarch*, wrote about one of her characters: "He once called her his Basil plant, and when she asked for an explanation, he said that the Basil was a herb which had flourished wonderfully on a murdered man's brains."

Balm (*Melissa officinalis*), so called because of its honied sweetness, occurs plentifully in our kitchen gardens, and was so highly esteemed by Paracelsus as the "*Primum ens Melissæ*" that he believed it would completely revivify a man. *The London Dispensatory* of 1696 said: "An essence of Balm given

in Canary wine every morning will renew youth, strengthen the brain, relieve languishing nature, and prevent baldness." Or, a Balm wine containing all the virtues of the fragrant, restorative herb may be made thus: Into four gallons of water put ten pounds of moist sugar; boil for more than an hour, skimming thoroughly; then pour into a crock to cool; place a pound and a quarter of Balm tops (bruised) into a small cask with a little new yeast, and when the liquor is cool pour it on the Balm. Stir them well together, and let the mixture stand for twenty-four hours, stirring it frequently; then close it up, lightly at first, and more securely after fermentation has quite ceased. When it has stood for six or eight weeks, bottle it off, putting a lump of sugar into each bottle. Cork the bottle well, and keep it for at least a year before putting it into use. Double the above quantity may be made at a time if more suitable for the requirements. "Balm," adds John Evelyn, "is sovereign for the brain, strengthening the memory, and powerfully chasing away melancholy." A tea made from the Garden Balm with boiling water, and drunk hot, is admirably cordial, and promotes free perspiration on an excess of catarrhal cold, or influenza; but against hysterical, or nervous troubles the tea should be made with cold water, so as not to dispel the volatile aromatic virtues of the herb. Formerly a spirit of Balm, combined with lemon-peel, nutmeg, and angelica root, enjoyed a great restorative reputation under the name of Carmelite water, being highly useful against nervous headache, and neuralgic affections. It is fabled that the Jew Ahasuerus (who refused a cup of water to our Saviour on his way to Golgotha, and was therefore doomed to wander athirst until Christ should come again) on a Whitsuntide evening begged for a draught of small beer at the door of a Staffordshire cottager, who was then far advanced in consumptive disease of the lungs. He got the drink, and out of gratitude advised the sick man to gather from his garden three leaves of Balm, and to put them into a mug of beer. This was to be repeated as a draught every fourth day throughout twelve days, the refilling of the cup to be continued as often as desired, and "then thy disease shall be cured, and thy body shall be altered." So saying, the Jew departed, and was never seen there again. But the cottager fulfilled his injunctions, and at the end of twelve days had become a sound man. The word Balm is an abbreviation of "Balsam," the chief of sweet-smelling oils.

Gerarde has told that "the juice of Balm glueth together greene wounds;" and "the leaves," say Pliny, and Dioscorides, "being applied do close up wounds without any perill of inflammation." It is now understood as a scientific fact that the balsamic oils of aromatic plants make excellent surgical dressings; they give off ozone, and thus exercise anti-putrescent effects; moreover, being chemical hydrocarbons, they contain so little oxygen that in wounds dressed with the fixed balsamic herbal oils the atomic germs of disease are starved out. Furthermore, the resinous parts of these balsamic oils as they dry upon the sore, or wound, seal it up, and effectually exclude all noxious air. Thus the essential oils of Balm, Peppermint, Lavender, and similar herbs, as well as Pine Oil, the resin of Turpentine, and Benzoin (Friar's Balsam), should serve admirably for ready application, on lint, or soft fine rag, to cuts, and superficial sores.

A couple of hundred years ago pancakes were made whilst using the herb Coltsfoot (*Tussilago farfara*), and fried with Sage butter. "Hark! I hear the Pancake bell," said poor Richard, making allusion thereto in his *Almanack* (1684). It is said that the Pancakes particular to Shrove Tuesday were originally appointed to be made then so as to dispose of the dripping and fat remaining over from the prolonged Christmas festivities, before the advent of the Penitential Fast. The bell rang for Confessional in every Church throughout England in Catholic times on the morning of Shrove Tuesday.

"It is a day whereon both rich and poore
Are chiefly feasted on the selfsame dish;
When every paunch till it can hold no more
Is fritter-filled as well as beast can wish;
And every youth and maid do take their turn,
And tosse their pancakes up for fear they burn,
And all the kitchen doth with laughter sound
To see the pancake fall upon the ground."

In our day the modern confectioner provides Coltsfoot Rock, concocted in fluted sticks, of a brown colour, as a sweetmeat, flavoured with some essential oil, as of Anise, or Dill. The herb Coltsfoot, which grows abundantly throughout England, especially along the sides of our railway banks, has been justly termed "nature's best herb for the lungs, and her most eminent thoracic." Its very name suggests this virtue,—*tussis*, a cold, *ago*, I dispel. All parts of the plant contain tannin, with a special bitter principle, and free mucilage. Coltsfoot tea can

be usefully made from the leaves, so strong as to be sweet, and glutinous; liquorice root, and honey may be added, and a decoction prepared therefrom if preferred. The older authors named this plant "*Filius ante patrem*," (the son before the father), because the starlike golden flowers appear, and wither, before the broad sea-green leaves are produced, and become conspicuous.

It is useful, and pleasant, to know that for sound physical reasons a moderate supper of bread and butter, with crisp, fresh lettuces (perhaps also a spring onion or two), and light, home-brewed ale made with Hops, is admirably calculated to promote healthy sleep (except for a full-blooded, plethoric person, who should fare otherwise).

The Hop (*Humulus lupulus*) grows wild in our hedges, and copses, with only male flowers; but when cultivated in the Hop garden it produces also the female catkins, or strobiles, which are commonly known as Hops, and are largely used for brewing purposes. The Hop was employed by the Saxons, and was imported into England from Flanders (1524). Soon afterwards a petition was presented to Parliament against the use of Hops, describing the plant as "a wicked weed which will spoil the taste of drink, and endanger the people." Persons have fallen into a deep sleep after remaining for some while in a storehouse of Hops. "Hops," says Evelyn, in his *Pomona* (1670), "transmuted our wholesome ale into beer, which doubtless much altered our constitutions. This one ingredient, by some suspected not unworthily, preserves the drink indeed, but repays the pleasure with tormenting diseases, and a shorter life." The "hops," or chaffy capsules of the flower seeds, turn brown early in the autumn; they possess a heavy, fragrant, aromatic odour, and a very bitter, pungent taste. The yellow glands at the base of their scales afford a volatile, strong-smelling oil, and an abundant yellow powder (lupulin) which possesses most of the virtues owned by the plant. Various Simples may be made from the Hop (such as Hop tea, Hop wine, and the Lupulin given in powder), each of which will ease pain, and lull to sleep. Hop tea is an excellent drink in delirium tremens; also it will give ease to an irritable bladder. Sherry in which Hops have been steeped is a capital stomachic cordial. And a pillow stuffed with newly-dried Hops was successfully prescribed by Dr. Willis for our King George the Third when sedative

medicines had failed to give him sleep; as likewise for our present King, when Prince of Wales, at the time of his severe attack of typhoid fever (1871), it being then used in conjunction with a most grateful draught of ale which had been previously withheld. The young tops of the Hop plant, if gathered in the spring, and boiled, may be eaten as asparagus; they were formerly brought to market tied up in small bundles for table use. The Hop is tonic, and acts on the kidneys, besides having antiseptic properties. "*Les jets de houblon*" (says *l'Art Culinaire*) are the spring vegetable *par excellence* in Belgium; the young sprouts are boiled in salted water, with a squeeze of lemon-juice, and served "*au beurre*," or "*à la crême.*" A poached egg is the unfailing accompaniment: you cannot realize the one without the other. Hops, and poached eggs, are the Orestes and Pylades of the Belgian *cuisine*. If boiled in water, with a little salt, pepper, and vinegar, Hop sprigs, tips, or points, make a nice, wholesome salad when cold. For the severe morning sickness of pregnant women, to drink freely of Hop tea (an ounce of the Hops to a pint of boiling water) will afford great relief; or a glass of bitter ale will ward off the attacks.

In Norfolk scarcely a cottage garden can be found without its Horehound corner, and Horehound beer is commonly drunk there by the natives. Again, Candied Horehound is a sweetmeat made by our confectioners from the fresh plant, by boiling it down until the juice is extracted, and then adding sugar before boiling this again till it has become thick enough of consistence to be poured into a paper case, and to be cut into squares when sufficiently cool. The plant White Horehound (*Marrubium*) is found growing in waste places, or is cultivated in the herb garden, being of popular use for coughs, and colds. It has a musky odour, and a bitter taste, affording chemically a fragrant volatile oil, a bitter extractive, "marrubin," and gallic acid. Its preparations are specially useful for coughs accompanied with copious thick phlegm; also for chronic bronchial asthma. Gerarde has said: "Syrup made from the greene, fresh leaves, with sugar, is a most singular remedy against the cough, and wheezing of the lungs. It doth wonderfully, and above credit, ease such as have been long sicke of any consumption of the lungs, as hath been often proved by the learned physicians of our London College."

"Just within recent times," according to Albert Broadbent,

"our garden plant, familiar particularly to all lovers of the National Roast Beef,—Horse Radish (*Cochlearia armoracia*)—has come to deserve specially well from the British public." Grated Horse Radish, if eaten at frequent intervals during the day, and likewise at meals, is found remarkably efficacious for getting rid of the persistent distressing cough which lingers after influenza. The root of Horse Radish contains sulphur, a volatile oil, a bitter resin, sugar, starch, gum, albumin, and acetates. Chemically its volatile oil is identical with that of mustard, being highly diffusible, and pungent, because of the "myrosin." One drop of this most volatile oil will suffice to odorize the atmosphere of a whole room. The root is expectorant, anti-scorbutic, and, if taken too freely, emetic. That it contains a somewhat large proportion of sulphur is shown by the black colour given to silver, and other metals with which it comes in contact. Because of this constituent the plant proves serviceable in chronic rheumatism, and for remedying scurvy. Bergius alleges that by cutting the root into very small pieces, without bruising it, and then swallowing a tablespoonful of these segments every morning without chewing them, throughout three or four weeks, a cure has been effected of chronic rheumatism which had proved intractable by all else which was tried. The sulphuretted oil is crystallizable. As to an outward use of Horse Radish, Gerarde has said about the root: "If bruised, and laid to a part grieved with the sciatica, gout, joynt-ache, or the hard swellings of the spleen, and liver, it doth wonderfully help them all." The botanical name *Cochlearia* implies a resemblance between the leaves of the plant and an old-fashioned spoon, *cochleare*. Formerly it was named Mountain Radish, and Great Raifort, (as now styled in France,) or Cran. When scraped it exhales a nose-provoking odour, and possesses a hot, biting taste, combined with a certain sweetness; on exposure to the air it quickly changes colour, and loses its volatile strength. Taken by itself, or in a plain sauce (but not being boiled) with oily fish, or rich, fatty viands, scraped Horse Radish acts as a spur to complete digestion thereof; at the same time it can benefit a relaxed sore throat by contact during the swallowing. When sliced across with a knife the root will exude some drops of a sweet juice which may be rubbed beneficially into rheumatic, or palsied limbs. An infusion of Horse Radish, sliced, or bruised, in cold water makes an excellent gargle, which

should be sweetened with honey, or glycerine. Also an infusion of sliced Horse Radish in milk, forms, by virtue of its contained sulphur, and by its stimulating pungency, an excellent cosmetic for the skin when lacking clearness, and freshness of colour. A mixture of recent Horse Radish juice, with white vinegar, will, if applied externally, do much towards removing freckles. When indolent pimples with a white head (acne) affect the skin, particularly at puberty, if each of these is touched now and again with some compound spirit of Horse Radish from the chemist, then the several pimples will be aborted, and will be dispersed without giving further trouble. For a relaxed throat, with loss of voice, a strong syrup of Horse Radish may be concocted, some of which should be mixed with water (a teaspoonful thereof to a wineglassful of cold water), and used freely as a gargle. Again, if the scraped root is macerated in vinegar it will form a mixture which, when sufficiently diluted with water, and sweetened, with glycerine, will give marked relief in whooping-cough of children, the dose being from one to two dessertspoonfuls according to age. Care should be had not to mistake poisonous aconite root for Horse Radish root when digging it up; the two roots really differ in shape, and colour; furthermore, aconite leaves, if present, cannot be easily mistaken for those of any other plant, being completely divided to their base into five wedge-shaped lobes, which are again subdivided into three. Scraped Horse Radish, if applied to recent chilblains, and secured with a light bandage, will help to cure them. For facial neuralgia some of the fresh scrapings, if held in the hand of the affected side, will give relief, the hand becoming in some cases within a short time bloodlessly white, and benumbed. When infused in wine, Horse Radish root will stimulate the whole nervous system, and promote perspiration, whilst acting further to excite a free flow of urine. If applied topically for pleuritic pain in the side, the bruised root will mitigate such pain.

For making Gill tea, which is popular in rural districts against a cough of long standing, the common and very familiar little herb, Ground Ivy (*Nepeta glechoma*) deserves notice from a culinary point of view. It is endowed also with singular curative virtues against nervous headaches, and for the relief of chronic bronchitis. "*Medicamentum hoc non satis potest laudari: si res ex usu æstimarentur, auro æquiparandum est.*" The small Ivy-like aromatic leaves, and the striking whorls of dark blue

blossoms which characterize this fragrant plant are conspicuous in early springtime about the bottom of almost every hedgerow throughout our country. It is gifted with a balsamic odour due to its particular volatile oil, and its special resin. For making a tea of this Ground Ivy : one ounce of the bruised fresh herb should be infused in a pint of boiling water, and a wineglassful thereof, when cool, should be taken three, or four times in the day. The whole plant was employed by our Saxon progenitors for clarifying their so-called beer, before hops had been introduced for this purpose. The Ground Ivy thus acquired its allied titles "Ale-hoof," and "Tun-hoof." Other names which it commonly bears are "Gill go by the ground," "Haymaids," "Catsfoot," and "Lizzy run up the hedge." Gill tea, as brewed by country persons, is sweetened with honey, sugar, or liquorice. The expressed juice of the herb is usefully astringent against bleedings. "Boiled in mutton broth," says Gerarde, "it helpeth weak, and aching backs." Dr. Pitcairn extolled this plant before all other vegetable medicines for curing consumptive diseases of the lungs.

In the *Organic Materia Medica*, of Detroit, U.S.A., 1890, it is stated "Painters use the Ground Ivy as a preventive of, and remedy for lead colic. A wineglassful of the freshly made infusion, or tea, is to be given repeatedly." Said Dr. Oliver Wendell Holmes, in his farewell address to the medical students at Boston College, "there is no form of lead poisoning which more rapidly, and more thoroughly pervades the blood, bones, and marrow than that which reaches the young author through mental contact with type-metal. '*Qui a bu boirra*,' 'He who has once drunk will drink again,' tells a French proverb. So, the man, or the woman who has tasted type is sure to resume the seductive indulgence, sooner or later. In my early college days, a students' periodical, conducted by some undergraduate friends of mine, tempted me into print. Such was my first attack of author's lead-poisoning, and I have never quite got rid of it from that day to this." A snuff made from the dried leaves of the Ground Ivy will render marked relief against a dull congestive headache of the passive kind. *Succus hujus plantæ naribus attractus cephalalgiam etiam vehementissimam et inveteratam non lenit tantum, sed et penitus aufert.* The herb remaineth green, not only in summer, but also in winter, at all times of the year.

In earlier English days the herb Lavender was used, and deservedly, as a rare condiment of cordial virtues, and welcome

aroma for flavouring dishes, and comforting the stomach; but at present its domestic service is solely for fragrance, and for scenting the household linen. Nevertheless, Lavender water as a spirit comes into handy appliance for a restorative against faintness, palpitations, or spasms. It proves refreshing to the sense of smell, and, if taken as a speedy stimulant, dispels flatulence whilst reviving the spirits. The sweet-smelling shrub is grown largely for market purposes in Surrey, Hertfordshire, and Lincoln, affording its essential oil from the flowering tops. These "spikes" of Lavender contain tannin, and a resinous camphor. Ordinarily the Lavender water of commerce is a misleading compound of various scents. During the twelfth century a washerwoman was ordinarily known in the north as a Lavenderess, whence comes our name Laundress. "I'll now lead you," says Piscator, in Walton's *Compleat Angler* (1653), "to an honest ale-house, where we shall find a cleanly room, Lavender in the window, and twenty ballads stuck about the wall." Again, "a match, good master! let's go to that house, for the linen looks white, and smells of Lavender: and I long to be in a pair of sheets that smell so." This tavern was probably the "Angler's Inn," near Hoddesdon, Herts, called then the "Rye House." Charles Lamb pronounced, "It might sweeten a man's temper at any time to read the *Compleat Angler*." Conserves of Lavender were served at table in Gerarde's day. This fragrant herb is hostile by its powerful aromatic odour to pestilent flies, fleas, and other such troublesome insects which assail the person. Even, say the *Reliquiæ Antiquæ*, "*Flys populum Domini cædunt*" —"Fleas afflict the people of the Lord!" It is told on good authority that the lions, and tigers, in our Zoological Gardens are strangely affected by the smell of Lavender, and become docile under its influence. A tea brewed of moderate strength from Lavender tops is excellent for relieving headache from fatigue, or exhaustion; also to mop the temples with Lavender water. Again, for palsied limbs, friction with a spirit of Lavender will powerfully stimulate towards restoring the use thereof. "It profiteth them much," says Gerarde, "that have the palsy if they be washed with the distilled water from the Lavender flowers, or are anointed with the oil made from the flowers, and olive oil, in such manner as the oil of Roses is used."

"In each bright drop there is a spell,
'Tis from the soil we love so well,
From English gardens won."

Fifty-six pounds of Lavender will yield exactly one pound of the liquid perfume.

Liquorice, or Licorice, as formerly called, is a plant-product familiar to us all, whether by the succus hardened into the well-known black stick of Spanish juice, or as made into lozenges, or Pontefract tablets, or as the pipe Liquorice of the sweet-stuff shops. The Liquorice plant is grown abundantly at Mitcham, near London, for supplying our markets, the roots being dug up after a three-years' cultivation. But the search of Diogenes for an honest man was scarcely more difficult than would be that of an average person for genuine prepared Liquorice; this is because the juice is adulterated to any extent, and there is no definite standard of purity for the article now so commonly used. Potato starch, millers' sweepings mixed with sugar, and any kind of such rubbish are employed as adulterants. The Chinese make much use of the Liquorice root, and its juice, which they regard as rejuvenating, and very nutritious. "In their drug stores," says the *Kew Bulletin* (1899), "one can generally obtain a panacea for all bodily ills, this varying in the number of its ingredients according to the price paid, twenty-five, thirty-five, or fifty cents. Such a prescription usually contains a few slices of Liquorice root (*Glycyrrhiza*), with the dried flowers of some composite plant, dried cockroaches, dried cockchafers, and the skin, with head, and tail, of a lizard stretched on thin sticks. An extra five cents will procure a dried sea-horse; and yet another five cents a dried fish of peculiarly narrow shape, and about four inches long. All these are boiled together, and the decoction drunk as a remedy for heartburn, toothache, cough, dimness of sight, and almost any other ailment. The vegetable portion of one of these mixtures has been examined at Kew. Among the medicaments recognized were the fruit-heads of a species of Eriocaulon, which has a reputation in China for curing various diseases, such as ophthalmia, nose-bleeding, and some affections of the kidneys. Other vegetable ingredients were likewise botanically recognized, and identified. Liquorice is commonly employed as a pectoral in coughs, and hoarseness. Chemically the root from which it is obtained affords a special sort of sugar, glycyrrhizine, a demulcent starch, asparagin, phosphate, and malate of lime, and magnesia, a resinous oil, albumin, and woody fibre. The extract is largely imported, that described as Solazzi juice being most highly esteemed,

which comes to us in cylindrical, or flattened rolls enveloped in bay leaves. The sugar of Liquorice may be safely taken by diabetic patients. By far and away the best Liquorice lozenges (for inducing quiet sleep, and against constipation), are those of old fashion still to be obtained as the manufacture of "Smith," in the Borough, London; not the pilules. Old Fuller wrote respecting Nottingham: "This county affordeth the first, and best Liquorice in England; great is the use thereof in physick. A stick of the same is commonly the spoon prescribed to patients to use in any loaches. If (as the men of Æneas were forced to eat their own trenchers) these chance to eat their spoons, their danger is none at all." Liquorice is likewise used in various other articles of confectionery, in brewing, and to be mixed with tobacco :—

> "But first he cheweth greyn, and lycorys
> To smellen sweete."
>
> *Miller's Tale.—Chaucer.*

Another favourite pot herb grown in the kitchen garden is Sweet Marjoram, of which the generic title *Origanum* signifies "Joy of the mountains." This plant furnishes an essential, fragrant, volatile oil which is cordial, warming, and tonic. "Organ," says Gerarde, "is very good against the wambling of the stomacke, and stayeth the desire to vomit, especially at sea. It may be used to good purpose for such as cannot brooke their meate." Externally the herb has been successfully employed against scirrhous tumours of the breast. Murray writes: "*Tumores mammarum dolentes scirrhosos herba recens. viridis, per tempus applicata, feliciter dissipavit.*" The essential oil, when long kept, assumes a solid form, and was at one time much esteemed for being rubbed into stiff joints. A tea brewed from the fresh herb will relieve headache of a nervous hysterical nature.

Several kinds of the Mints have been used medicinally from the earliest times, such as Pennyroyal, Peppermint, and Spearmint; each of which, though growing wild in wet and marshy wastes, is cultivated in our herb gardens for kitchen purposes. Their flowering tops are all found to contain a certain portion of camphor. The Mint plant was eaten gaily of old, with many a joke, because said to have been originally a pretty girl metamorphosed by Persephone. The Pennyroyal (*Mentha pulegium*) was formerly known as Pudding grass, from being

used in making stuffing for meat, in days when such stuffing was called a pudding.

> "Let the corporal
> Come sweating under a breast of mutton stuffed with pudding."
> *Old Play.*

Treadwell tells that the Pennyroyal was especially put into hogs' puddings, which were composed of flour, with currants, and spices, stuffed into the entrail of a hog. The fresh herb Pennyroyal yields about 1 per cent of a volatile oil containing oxygen, with other diffusible matters. Folk talk in Devonshire of "Organ broth," and "Organ tea," which are much in favour with women. The oil of Pennyroyal, if applied externally, will promptly relieve severe neuralgic pain. Dryden, in *Ovid's Metamorphoses*, writes to this effect :—

> "They rubbed it o'er with newly-gathered mint,
> A wholesome herb that breathed a grateful scent."

"Organ tay," say the Devonshire peasants, "sweentened wi' 'oney is a cabbical cure vur a cold ef yü putt'th a drap ov zometheng short in't." "Hillwort" was another old name of the herb.

Peppermint (*Mentha piperita*), or "Brandy Mint," is of universal acquaintance among all classes through its "sweeties," drops, lozenges, and comforting, fragrant "water," being "familiar in our mouths as household words." The herb is so called because of its peppery, pungent taste, and smell. Preparations of Peppermint when swallowed diffuse warmth in the stomach, acting as carminative stimulants, with some considerable power of allaying the distress of colic, flatulent distension, spasm, or oppressive food. This is through the potent volatile oil, of which the herb yields 1 per cent as Mint camphor.

> "Anise and mint, with strong Æolian sway
> Intestine storms of flatulence allay."

There are two sorts of the Peppermint herb—black, and white—of which the first furnishes the most, but not the best oil. As an antiseptic and destroyer of germs, this oil is remarkably efficacious; on which account it is advised for inhalation by consumptive patients, so that the volatile preservative vapour may reach remote diseased parts of the ultimate lung passages, and may heal by destroying the morbid germs which are keeping

up mischief therein. A simple respirator for inhaling the oil vapour can be made with a small square of thin, ductile, perforated zinc plate, bent, and adapted as a little funnel, widely open at top to the shape of the mouth, and nostrils, but without any free side apertures; and within the narrow end of which funnel may be secured a small pledget of sponge, or absorbent cotton-wool, for frequent saturation with from twenty to thirty drops of a spirituous essence of Peppermint made with the oil, and spirit. This quantity of the essence should be dropped on the sponge each night, and morning, whilst the apparatus is to be worn over the mouth, and nostrils, (by tapes at its sides to tie over the head) all day, except at meals. The oil, and the essence are of an agreeable odour in a room, and are absolutely harmless. In France continuous inhalations of Peppermint oil (either by itself, or combined with oil of tar) have come into approved use with much success, even when cavities are present in the lungs, with copious expectoration of the consumption microbes. The cough, the night-sweats, and the heavy phlegm have been arrested, whilst the nutrition, and the weight have steadily increased. "Peppermint" (Dr. Hughes) "should be more largely employed than it is in coughs, especially in a dry cough, however caused, when it seems to act specifically as a cure. It will relieve in this way even the persistent hectic cough of a consumptive patient." Unhealthy external sores may be cleansed, and their healing promoted by being dressed with strips of soft rag dipped in sweet oil to each ounce of which two or three drops of oil of Peppermint have been added. The oil, or the essence of Peppermint can be used of any strength, and in any quantity, without the least harm to a patient. It checks the discharge of unhealthy matter when applied to a sore, or wound, whilst exercising a salutary antiseptic effect. "Altogether" (as Dr. Braddon writes) "the oil of Peppermint forms the best, safest, and most agreeable of known antiseptics."

For obviating mosquito bites, the ablutionary use of Peppermint soap all over the body, or, in default thereof, employing soft soap with which a few drops of oil of Peppermint have been mixed, will prove efficacious. "Take a little of this," says an experienced traveller, "into the hands with some water, then wash therewith the face, the body throughout, and the hands, and let it dry on every part likely to be exposed to

mosquito bites." Continental pathologists have found oil of Peppermint highly useful as an internal antiseptic for correcting poisonous intestinal products given off when fæcal matters are detained within the bowels so long as to undergo corrupt putrefactive changes, because of persistent constipation. Various skin troubles may result from this cause, such as nettle-rash, mattery pimples, itching, and erysipelatous redness, whilst severe general neurotic rheumatism may eventually ensue until the difficulty is obviated. When crystallized into a solid form as "menthol," the oil, if rubbed over the skin surface of a painful neuralgic part, will give speedy, and marked relief, as for frontal headache, tic doloureux, facial toothache, and other such grievous troubles. Distilled Peppermint water should be always preferred medicinally, from half to one wineglassful at a time. The stronger, and smaller Peppermint lozenges supplied by chemists are of excellent use when sluggishness of the intestines causes detention within them of the torpid food mass, with putrescent changes, and the giving off of noxious gases for absorption into the body. Two of these lozenges should be then sucked slowly a couple of hours after each more substantial meals of the day. They will serve to act in this manner as preventive of appendicitis from a similar cause. For making "Peppermint drops," take two cupfuls of granulated sugar, half a cupful of cold water, and a tiny pinch of cream of tartar. Boil these together for ten minutes, without stirring, and let the sugar melt slowly so that it may not burn. Add eight (for the stronger Peppermints twelve) drops of oil of Peppermint while the mixture is still on the fire. When removed from the stove mix with an egg-beater until it falls in long drops, then drop quickly on oiled paper.

As an antiseptic snuff for use on the first access of a cold in the head, or against attacks of hay-fever, menthol (in combination with some cocaine ?) is found to be promptly, and preventively useful. How glad Sydney Smith would have been to learn this fact! When victimized by hay-fever (in June, 1835) he wrote as follows to the famous Sir Henry Holland, from Combe Florey: "I am suffering from my old complaint, the hay-fever (as it is called); my fear is perishing by deliquescence. I melt away in nasal, and lachrymal profluvia. My remedies are, warm pediluvium, cathartics, and topical application of a watery solution of opium to eyes, ears, and the interior of the nostrils.

The membrane is so irritable that light, dust, contradiction, an absurd remark, the sight of a dissenter, anything sets me sneezing; and if I begin sneezing at twelve I don't leave off till two o'clock, and am heard distinctly in Taunton, when the wind sets that way, a distance of six miles. Turn your mind to this little curse."

Spear Mint (*Mentha viridis*), or Garden Mint, is an allied herb which is of popular use for making Mint sauce, to be eaten with roast lamb. It likewise possesses a fragrant aromatic odour, and a warm, spicy taste; bearing the name also of "Mackerel Mint," and in Germany of "Lady's Mint." Its volatile oil makes this herb antiseptic, and conducive to the better digestion of young immature meat, whilst the vinegar and sugar added in Mint sauce, help forward the solution of crude albuminous fibre. But, as is well said, "Mint often makes lamb out of an old sheep." Mint sauce was described by Tusset, and blest by Cobbett. Dr. Hayman has supposed it to historically reflect the bitter herbs of the Jewish Passover. When some fresh leaves of this herb are macerated in milk the curdling thereof is slower than if the milk clots by itself; therefore Spear Mint, or its essence, is much to be commended for use with milk foods by delicate persons, and for young children of feeble digestive powers. A distilled water of Spear Mint is made which will relieve hiccough, and flatulence, as well as the giddiness of indigestion, wherefore Martial called the herb "*Ructatrix mentha.*" "This is the Spear Mint," writes our Poet Laureate, "that steadies giddiness." The name Spear, or Spire, indicates the spiry form of its floral blossoming. Washington Irving, in *Knickerbocker*, speaks of New Englanders who "were great roysterers, much given to revel on hoe-cakes, and bacon, Mint julep, and apple-toddy." Julep is an ancient Arabian name for a calming drink (originally containing opium, with mucilage), and possibly connected with the Persian "salep" made from bulbs of an orchis. Culpeper wrote: "The Mints are extreme bad for wounded people; and they say a wounded man that eats Mints his wound will never be cured, but that is a long day." Nevertheless, modern experience teaches that the Mints are to be credited with terebinthine antiseptic healing virtues, notably peppermint, rosemary, and thyme. "As for the Garden Mint," wrote Pliny, "the very smell of it alone recovers, and refreshes the spirits,

much as the taste stirs up the appetite for meat, which is the reason that it is so general in our acid sauces wherein we are accustomed to dip our meat."

Our table Mustard, which flanks English roast beef, and other rich viands, is made from the seeds of a herb originally wild on waste places in this country, but now cultivated, the *Sinapis*, both black, and white. It is the black Mustard which yields the condiment of the mustard pot, and the pungent yellow flour which we employ for the familiar stimulating poultice, or sinapism. The virtues of this black Mustard depend on an acrid volatile oil comprised in the seeds, which is combined with an active principle containing sulphur abundantly; as shown by the discoloration of a silver spoon if left in contact with Mustard made for the table, a black sulphuret of silver being formed. The chemical basis is "sinnigrin," with myronic acid. The acridity of the oil is modified in the seeds by being combined with another fixed oil of a bland nature which can be readily separated by pressure, and which will promote the growth of hair if employed as a mild pomade; it may be used also externally with friction for relieving rheumatic stiffness of muscles.

Mustard flour is a capital antiseptic, and sterilizing agent. Admixture with vinegar will check the development of pungency in Mustard made for the table, so that this practice is now discontinued. Probably the Romans, who were great eaters of Mustard seed, pounded, and steeped in new wine (*mustum*), brought the condiment with them to our shores, and first taught the ancient Britons how to prepare it. For obstinate hiccough a teacupful of boiling water should be poured on a teaspoonful of Mustard flour, and taken as promptly as may be, half at first, and the other half in ten minutes, if still needed. When an emetic is required for speedy effect, if a tablespoonful of Mustard flour has poured on it a pint of lukewarm water, to be mixed, and taken at a draught, this will operate briskly, and surely. The volatile oil of Mustard flour contains erucic, and sinapoleic acids. A hot Mustard foot-bath serves by the diffusion of this oil around the person to prove soporific by inhalation, whilst the feet also are beneficially stimulated below. The notion has long prevailed that for preserving one's memory even to an advanced age, nothing is better than Mustard.

Messrs. Keen & Co., the oldest London firm of the Mustard trade, had their place of business as long ago as 1742 at Garlick Hill,

or Hythe, the harbour to which garlic, and other such seasonings were brought. Hard by was the church of St. James, who was often represented as a Pilgrim, and whose device in that capacity, a scallop-shell, appears above the church porch. Hence the adoption of this scallop-shell as a trade-mark of the Keen firm. Actual scallop-shells, or metallic imitations of them, were formerly used as scoops by retail dealers in Mustard and spices; it is even said that some specimens of these articles are still to be found in old-fashioned shops kept in out-of-the-way places.

Mustard flour is an infallible antiseptic, and sterilizing agent, besides being a capital deodorizer. Black Mustard seed, when bruised, develops a very active pungent principle, with a powerful penetrating odour which makes the eyes water; this principle contains sulphur abundantly. Mustard flour being such a ready deodorizer, if moistened with a little water into a paste has the remarkable property of dispelling the odours of musk, camphor, and the fœtid gum resins — turpentine, creosote, asafetida, and such like. "Mustard—the roguish Mustard, dangerous to the nose"—as John Swan has taught in *Speculum Mundi* (1643) "is marvellous good for the voice of she who would sing clear; but it hath, moreover, another good propertie which must not be forgotten :—

> "She that hath hap a husband had to burie,
> And is therefore in heart no sad but merrie;
> Yet if in shew good manners she would keep,
> Onyons and mustard seed will make her weep."

"Flamingoes, and Mustard both bite," said the Duchess (*Alice in Wonderland*), and the moral is, "Birds of a feather flock together." "Only, Mustard isn't a bird," Alice remarked; "it's a mineral, I think," said Alice. "Of course it is," said the Duchess; "there's a large Mustard mine near here, and the moral of it is 'the more there is of mine, the less there is of yours.'" Although Mustard at table invariably flanks the "roast beef of old England" which gives national strength, and sinew, yet according to a familiar nursery rhyme it is credited with opposite effects by children, who taunt a craven playmate as :—

> "Cowardy, cowardy custard,
> Who ate his mother's mustard."

The white Mustard is best known to us as produced for its young

leaves to be eaten in the combination of Mustard and Cress with a salad, or with bread and butter. This plant, which grows, when uncultivated, on waste ground with large yellow flowers, does not afford under any conditions a pungent oil like the black Mustard. "When in the leaf," John Evelyn tells in his *Acetaria*, "Mustard in young seedling plants is of incomparable effect to quicken, and revive the spirits, strengthening the memory, expelling heaviness, preventing the vertiginous palsy, and a laudable cephalic, besides being an approved anti-scorbutic." The active principle of this white Mustard is *sinapin*, and the seed germinates so rapidly that it has been said a salad of the herb may be grown therefrom whilst the joint of meat is being roasted for dinner. When swallowed whole in teaspoonful doses three or four times a day the seeds will exercise mechanically a laxative effect, being voided from the lower bowel without undergoing any perceptible change except that their outer skin has become a little softened, and mucilaginous. For a relaxed sore throat a gargle of bruised Mustard-seed tea proves serviceable.

Chemically the Nettle (*Urtica dioica*, and *urens*), of familiar acquaintance all over the country, is so constituted as to provide a food available for helping to obviate several bodily ailments, and infirmities. It contains formic acid, mucilage, mineral salts, ammonia, carbonic acid, and water. A strong infusion of the fresh leaves is soothing, and healing as a lotion for burns; the dried leaves, when burnt so as to give off their fumes to be inhaled, will relieve bronchial, and asthmatic troubles, ten grains, or more, being thus employed at a time. As far back as in the year 1400 an entry was made in the churchwarden's account at St. Michael's, Bath, "*pro urticis venditis ad Laurencium.*" In 1890 a West End vegetable dealer in London recognized the wholesome, and nutritious properties of young Nettle tops when cooked for the table, and he arranged for a regular supply of the same on finding that a ready sale existed for these wares. If Nettle tops are taken as a fresh young vegetable in the spring, and early summer, they make a very salutary, and succulent dish of greens, which is slightly laxative; but during autumn they are hurtful. The true Stinging Nettle, with a round, hairy stalk, and which bears only a dull, colourless bloom, must be secured, and not a labiate Nettle with a square stem. The stinging effect of the true Nettle is caused by an acrid secretion contained in minute vesicles at the base

of each of the stiff hairs; and *urtication*, or flogging with Nettles, is an old external remedy which has been long practised for chronic rheumatism, and loss of muscular power. A tea made from young Nettle tops is a Devonshire cure for nettlerash. But such a decoction, when brewed too strong, and drunk too freely, has produced a severe burning over the whole body, with general redness of the skin, and a sense of being stung; the features became swollen, and minute vesicles broke out, which presently burst, and discharged a limpid fluid. Again, Nettle tea will promote the extrication from the body of gouty gravel through the kidneys; and fresh Nettle-juice, given in doses of from one to two tablespoonfuls, is a most serviceable remedy for losses of blood, whether from the nose, the lungs, or some other internal organ. If a leaf of the herb be put upon the tongue, and pressed against the roof of the mouth, it will stop a bleeding from the nose.

For a bee-sting the immediate application of a Dock leaf rubbed-in is a familiar, and popular remedy, as antidotal to the formic acid of the bee venom. It is the same formic acid which causes smarting, and swelling from being stung by Nettles, with their lance-like leaves having at the base of each lance a diminutive sac which ejects a tiny drop of the formic acid into the wound inflicted. Such formic acid is, nevertheless, necessary to the well-being of our blood; it is found in the muscles of all flesh, and is believed to be an antidote against the uric acid of rheumatism, insomuch that to be stung purposely by bees is commended for uric acid rheumatic patients. Nettle-stinging will answer equally well on the same principle, whether by external application, or by eating young Nettles (of the stinging species) cooked in their own juices, or with only a lettuce leaf added for moisture. The cottage wife makes Nettle-beer, and considers it a cure for the gouty old folk: she does not know why, but only makes use of the knowledge handed down to her by past experience from her predecessors. It is the formic acid in the Nettle, with the phosphates, and the trace of iron, which constitute it such a valuable medicinal food.

A crystallized alkaloid (which is fatal to frogs in a dose of one centigramme) has been isolated from the common Stinging Nettle. If planted in the neighbourhood of beehives the Nettle will serve to drive away frogs. In Italy, where herb soups are much in favour, the "herb knodel" of Nettles made into round

balls like dumplings, are esteemed as nourishing, and purifying. When plainly boiled the young Nettle-tops closely resemble spinach. A good melted butter as a sauce improves them mightily; or cottagers compound an excellent white sauce for the purpose by melting a good-sized lump of lard in a basin, then rubbing in as much flour as the liquid will take up, making it quite free from lumps, and filling up the basin with boiling water; afterwards adding salt to taste; the sauce affords just the sufficiency of fat which is otherwise lacking. The Nettle is one of the very best anti-scorbutics. Macaulay, who hated Brougham, wrote concerning him: "His powers are gone, like a dead Nettle: his spite is immortal." Nettle leaves, as already said, when dried, and powdered, will sometimes relieve asthma, and similar bronchial troubles, by inhalation, whilst other measures fail; eight, or ten grains should be made to smoulder, and their fumes inspired when spasmodic difficulty of breathing comes on, or at bedtime. For Nettle-beer any adequate amount of young, green Stinging Nettles are to be boiled up in a gallon of water, with the juice of two lemons for giving a sharp flavour, and a teaspoonful of crushed ginger, whilst for sweetening purposes a pound of brown sugar is mixed in. Then some fresh yeast from the brewer is to be floated on toast in the liquor when cold, so as to ferment it; and it may be afterwards bottled as a specially wholesome sort of ginger-beer. Young Nettles of the stinging species, when mashed, and finely pulped, being then mixed with an equal bulk of thick cream, pepper, and salt added to taste, make a valuable food for a consumptive patient. Pepys records it thus (February 25th, 1660): "To Mrs. Symons, and there we did eat some Nettle porridge, which was made on purpose to-day, and was very good."

Garden Parsley was not cultivated in England until during Edward the Sixth's reign (1548). We use it rather as a garnish, and for stuffing, together with other herbs, than for any medicinal purposes. Nevertheless, it possesses, in root, and branch, potential virtues for the sick, and ailing; though in the present day a Parsley bed is associated rather with those who come into the world, than with those who would guard themselves against leaving it. Proverbially this herb patch in the garden is held out as the fertile source of new-born brothers and sisters, when appearing (unexpectedly by the other youngsters) suddenly within the limits of the family circle. In Germany

babies are "brought by the stork." The Parsley root is faintly aromatic, and has a sweetish taste. It contains a chemical principle "apiin," with sugar, starch, and an aromatic volatile oil. Likewise the fruit furnishes the same volatile oil in larger abundance, this oil comprising parsley-camphor, and "apiol" (the true essential oil of Parsley). Such "apiol" is dispensed by our druggists, and is of singular use for correcting female irregularities of periodical function. Country folk in many places think it unlucky to sow Parsley, or to move its roots; and a rustic adage puts it that "Fried Parsley brings a man to his saddle, and a woman to her grave." The bruised leaves when applied externally, will serve to soften breasts which are hard in early lactation, and to resolve them whilst nursing when knotty, and painful, with threatened abscess. Likewise the bruised leaves have successfully dispelled tumours suspected to be cancerous, when more orthodox remedies had failed. It is quite certain that the dispersion, or healing of cancerous growths, and tumours, have followed administration of this, and other herbal medicaments, even in advanced cases of an undeniably malignant character: such remedies to wit as Celandine, Clover, Comfrey, Cinnamon, and Violets. If cause and effect are at work in such cases, it is possible that some occult common principle underlies, and runs through them all, which has yet to be discovered. Though used so commonly at table, yet Parsley is proved by indisputable facts to have induced epilepsy in certain bodily systems when eaten to excess, particularly whilst uncooked. Alston says: "I have observed, after raw Parsley has been eaten freely, a fulness of the blood-vessels about the head, and an inflamed state of the eyes, with congestion of the face, as if the cravat were too tight." The name was formerly spelt "Percely," and the adjective title "petroselinum" signifies *growing on a rock*. In France a rustic application to scrofulous swellings is successfully used, which consists of green Parsley, and snails, pounded together in a mortar to the thickness of an ointment, some of which is spread on linen, and applied liberally every day. Parsley tea exercises a decided action on the lining membrane of the urinary passages, and may be given helpfully when this is sore, or inflamed. The essential oil of Parsley has proved beneficial against epilepsy in certain subjects.

The excellence of Parsley-sauce—useful as a medicament—

always depends on chopping the fresh green leaves very small. Take a handful of fresh Parsley, wash it, bruise the stalks, and boil them with the leaves for ten minutes in only a little water; then chop them small, first picking out the tough woody pieces; put them into a sauce boat, with some of the liquor in which they were boiled, and pour well-made white sauce (not rich with melted butter) over them. When "*Aux fines herbes*" is directed in cookery, Parsley is practically intended, though a mixture of tarragon, Parsley, chervil, shalots, chives, basil, and mushrooms, chopped, and sweated in fat, may be signified as well.

"One morning in the garden bed
The onion and the carrot said
Unto the parsley group:
'Oh, when shall we three meet again,
In thunder, lightning, hail, or rain?'
'Alas!' replied, in tones of pain
The parsley, '*in the soup.*'"

Botanically, all the Parsleys show themselves singularly wise in their generation; having many single, diminutive, insignificant-looking flowers (which furnish the nectar), they agree to unite these in one important-seeming umbel. Nevertheless, none but small fry, such as gnats, thrips, ants, and flies can effect entrance so as to possess themselves of the honey in the tiny florets; and thus it is that the whole umbel by way of attractiveness simply for such insects, displays only neutral work-a-day tints warranted to wear well, and to wash until thread-bare, instead of the brilliant blues, the warm reds, and the gay golden yellows, of those richly-decorated corollæ which serve to allure painted butterflies, and lepidopterous lordlings.

A good old custom of former times was to burn Rosemary (which is still cultivated in our kitchen gardens as a sweet-scented, fragrant herb) in the chambers of the sick, because of its supposed preservative powers against pestilential disorders. For the same reason a sprig of Rosemary was carried in the hand at a funeral. It was believed that smelling at the sprig afforded a potent defence against any morbid effluvia from the corpse. The shrub (*Rosmarinus*) has a pleasant scent, and a bitter, pungent taste, because of an essential volatile oil chiefly present in the leaves, and tops. Other fragrant active principles reside in the flowers. The name is derived from *ros*, dew, *marinus*, of the sea, in allusion to the grey, glistening appearance of the herb, and its natural locality near the sea, with an odour thereof.

It is ever green, and bears small pale-blue blossoms. "The flowers of Rosemary," says an old author, "made up into plates (lozenges, or tablets), with sugar, and eaten, comfort the heart, and make it merry, quicken the spirits, and cause them to be lively." Rosemary tea will soon relieve nervous depression; some persons drink it for breakfast as a restorative. In the French language of flowers this herb represents the power of re-kindling lost energy. Rosemary wine taken in small quantities acts as a quieting cordial to a heart of which the action is irregular, and palpitating; it will further serve to dispel any accompanying dropsy by stimulating the kidneys. This wine may be made by chopping up sprigs of *green* Rosemary, and pouring on them some sound white wine, which after three or four days may be strained off, and put into use. The green-leaved variety is the kind to be used medicinally; there are also silver, and golden-leaved sorts. Sprigs of the shrub were formerly stuck into beef whilst being roasted, as an excellent relish. A writer (1707) tells of "Rosemary-preserve to dress your beef." In early times the Rosemary was freely cultivated in kitchen gardens, and it came to represent the dominant influence of the house-mistress.

"Where Rosemary flourished the woman ruled."

A spirit made from the essential oil with spirit of wine will help to renew the vitality of paralysed limbs if rubbed in with brisk friction. The volatile oil includes a special camphor similar to that possessed by the myrtle. An ounce of the dried leaves and flowers, when treated with a pint of boiling water, and allowed to stand until cool, makes one of the best hair-washes known. It should be mixed with honey-water (as distilled from honey incorporated with sand), the same being likewise of itself excellent for promoting growth of the hair. Incidentally with respect to the present fashion adopted by young men of shaving close as to whiskers, and beard, (so as to retain, it may be supposed, a juvenile look), the suggestive letter (xxxii) of Selborne in his well-known *Natural History* may be profitably quoted: "It is plain that the deprivation of masculine vigour puts a stop to the growth of those hirsute appendages which are looked upon as its insignia; thus eunuchs have beardless chins, smooth limbs, and squeaking voices. But (as the ingenious Mr. Lisle testifies)

the loss of such insignia of manliness as the facial hair, and its accompaniments, has sometimes a strange effect on the masculine abilities ; thus he had a boar which was so fierce and venereous, that to prevent mischief orders were given for his tusks to be broken off. No sooner had the beast suffered this injury than his powers forsook him, and he neglected those females to whom before he was passionately attached, and from whom no fences would restrain him." This was a forecast of Darwin's more recent substantiated facts.

The famous "Hungary water" for outward application, was first invented for a Queen of Hungary, who by its continued use became completely cured of paralysis ; it was prepared by putting one and a half pounds of the fresh tops of Rosemary when in full flower into a gallon of spirit of wine, which had to stand for four days, and was then distilled. Hoyes tells that the formula for composing this noted "water," as written by Queen Elizabeth's own hand, is still preserved in the Imperial Library at Vienna. It was further esteemed for doing much good against gout when occurring in the hands, and feet, by being rubbed into the affected limbs with some brisk friction. In the French hospitals it is customary to burn Rosemary together with juniper berries, for purifying the air, and preventing infection. This plant contains also some tannin, together with a resin, and a bitter principle. By old writers it was said to increase the flow of breast-milk ; the herb is used in preparing *Eau de Cologne.* In olden days sprigs of the shrub were put with a corpse into the coffin, and others were thrown into the grave "for remembrance." Most probably an instinctive knowledge had even then been acquired of the anti-putrescent virtues of this herb, as well as of its protective aromatic powers against infection. Mrs. Gaskell, in *Sylvia's Lovers,* has told of the same custom when describing a rustic burial : "Some sign of mourning was shown by everyone, down to the little child in its mother's arms that innocently clutched the piece of Rosemary to be thrown into the grave 'for remembrance.'" The poet Gay also alludes to the same practice when describing the burial of a country lass who had come to an untimely end :—

"To show their love the neighbours far and near
Followed, with wistful looks, the damsel's bier :
Sprigged Rosemary the lads and lasses bore,
While dismally the parson walked before :
Upon her grave the Rosemary they threw,
The Daisy, Butterflower, and Endive blue." 25

It was dear old blind Margaret in Charles Lamb's first story (*Rosamund Gray*, 1798) who had among her half-dozen cottage volumes "a cookery book, with a few dry sprigs of Rosemary, and Lavender, stuck here and there between the leaves (I suppose to point to some of the old lady's favourite receipts)." In a well-known song which the spirited rendering of Santley has immortalized,—"Simon the Cellarer"—it is quaintly, and picturesquely told :—

"Dame Margery sits in her own still room,
And a matron sage is she :
From thence oft at curfew is wafted a fume :
She says it is 'Rosemarie' !
But there's a small cupboard behind the back stair,
And the maids say they often see Margery there.
Now Margery says that she grows very old,
And *must* take a something to keep out the cold :
But ho ! ho ! ho ! old Simon doth know.
Where many a flask of his best doth go."

For stuffing ducks, and geese, to be roasted, the conventional blend is of Sage, and onions; as regards the former of which this garden herb Sage contains an active principle which resists animal putrescence. Furthermore, the said principle, "salviol," together with the bitterness, and condimentary pungency of the Sage leaves, enables the stomach to better digest rich, luscious meats, and gravies. Our well-known Sage, which is plentiful in every kitchen garden, is aromatic, and fragrant, by reason of its volatile, camphoraceous essential oil. The botanical name *Salvia* is derived from a Latin verb *salvere*, to be sound in health. "*Cur moriatur homo cui Salvia crescit in horto?*" saith an old monkish line—"Why should a man die as long as Sage grows in his garden?" There is no better way of taking Sage as a stomachic wholesome herb, than by eating it with bread and butter. "This herb," says Gerarde, "is singular good for the head, and brain: it quickeneth the senses, and memory; strengtheneth the sinews, restoreth health to those that hath the palsy, and takes away shaky trembling of the members." John Swan, in *Speculum Mundi* (1643), writes: "Sage also take, for it hath many virtues, and a great desire to make a man immortall."

"Sage makes the sinews strong, the palsie cures;
And by its help no ague long endures."

"A little vinegar sprinkled upon its leaves lying upon coals,

and so wrapped in a linnen, and holden very hot unto the side of those that are troubled with a grievous pain, taketh away the pain presently, and also greatly helpeth the extremitie of a pleurisie." In pulmonary consumption, and for hectic feverish wasting diseases, "an infusion of the garden herb Sage is much to be commended, as well as for excessive perspiration of the feet, with fetid odours from the sodden skin." Steep a teaspoonful of dried Sage leaves in half a pint of water for twenty-four hours and strain: then let the patient take a teacupful in the morning, one during the day, and another at night: or a spirit of the fresh bruised leaves may be given, a teaspoonful with water two or three times a day. A strong infusion of the herb has been used with success to dry up the breast-milk for weaning an infant: and as a gargle, sage-leaf tea with some honey, answers admirably. Rue should be planted with the Sage:

"Salvia cum Rutâ faciunt tibi pocula tuta."

The Chinese are as fond of Sage as we are of their fragrant teas; and the Dutch once carried on a profitable trade with them by exchanging a pound of Sage leaves for each three-pound parcel of tea. Dr. Hart (1633), exclaiming against the use of tobacco by weakly persons, and invalids, has said: "Why may not garden Sage as safely, and without any seeming show of danger, be used instead? It is by all our physicians accorded, and agreed-upon that this doth apparently corroborate, and strengthen the nerves, and by consequent all the animal powers, beside the excellent virtues thereof recorded, the like whereof were never ascribed to tobacco." Sage bread is dough mixed with a strong infusion of the Sage plant (first bruised) in milk. Boyle has reported (1668): "I have known Sage bread to do much good in drying up humours." For making "Sage tea," "take of fresh leaves of green Sage, plucked from the stalks, and washed clean in cold water, half an ounce; of sugar, one ounce; of the outer rind of lemon-peel finely pared from the white, a quarter of an ounce. Put these into two pints of boiling water, and let them stand near the fire for half an hour, then strain." When dried Sage leaves are used, rather less in quantity than directed for the fresh leaves should be employed. Such a tea (as likewise of Rosemary, Balm, or Southern-wood) will serve to prevent a thirsty, fevered patient from desiring to drink too much tea, or coffee when not good for him; it also

acts as an antiseptic. Moreover, Gerarde declares : " A conserve of floures of Clove Gillofloure (Carnation), and Sage, is exceeding cordial, and doth wonderfully above measure comfort the heart, being eaten now and then with the meate."

Closely allied to the garden Rhubarb (a dock), from the brilliant red leaf-stems of which we make favourite puddings, and pies, is the garden Sorrel (*Rumex acetosus*), also a dock, and the chief constituent of *Soupe aux herbes*, such as a French lady will order for herself after a long, and tiring journey. But the Sorrel preferred in France is *Rumex scutatus*, because more succulent, and less sour than our garden herb. For the said soup, " put into a saucepan a piece of butter (egg size), three leaves of lettuce (finely cut up), a pint of Sorrel leaves (minced), an onion, and three sprigs of parsley (likewise minced). Cover the saucepan, and let all these stew gently for ten minutes ; then sift in two tablespoonfuls of flour, mixing well ; pour in gradually, whilst stirring all the time, three quarts of boiling water. Put a cupful of mashed potato into three-quarters of a cupful of rich milk, and add to the soup ; season with pepper, salt, and a pinch of nutmeg. Mix the beaten yolks of four eggs with a little milk (using a cupful altogether) in the tureen, and pour in some of the boiling soup ; put in some dice of toast, and pour the rest of the soup over : cover, and stand it in a warm place for five minutes ; serve hot. If preferred, this soup may be passed through a sieve before pouring it over the eggs. In such soups the Latins use a tiny clove of garlic, either rubbing it on the croutons (toasted crust dice), or inside the kettle."

The Sorrel Dock with us bears also the names Sour Sabs, Sour Garbs, Sour Suds, Sour Sauce, Cuckoo Sorrow, and Green Sauce. Country people beat the herb to a mash, and take it mixed with vinegar, and sugar, as a green sauce with cold meat. When boiled without water (in its own juice) it serves as an excellent accompaniment to roast goose, or pork, instead of apple sauce. Because corrective of scrofulous deposits, Sorrel is specially beneficial towards the cure of scurvy. Says John Evelyn, in *Acetaria* (1699) : " Sorrel sharpens the appetite, assuages heat, cools the liver, and strengthens the heart ; it is an anti-scorbutic, resisting putrefaction ; and in the making of sallets imparts a grateful quickness to the rest as supplying the want of oranges, and lemons. Together with salt it gives both the name, and the relish to sallets, from the sapidity, which renders not plants

and herbs only, but men themselves, and their conversations pleasant, and agreeable. But of this enough, and perhaps too much ! lest while I write of salts and sallets, I appear myself *insipid.*" The sour taste of both Sorrel, and the garden Rhubarb, is due to oxalic acid, or rather to the acid oxalate of potash. In a gouty person who has lime in the blood, and humours, a combination between it and the Sorrel, or Rhubarb acid, takes place of an irritating character, leading to the formation of oxalate of lime (dumb-bell) crystals, which are voided by the kidneys in the urine. At the same time considerable disturbance of the general health takes place. Dr. Prout says he has seen well-marked instances in which an oxalate of lime kidney attack has followed the use of Garden Rhubarb in a tart, or pudding, likewise of Sorrel in a salad, particularly when at the same time the patient has been drinking hard water. But chemists explain that oxalates may be excreted in the urine without having necessarily been a constituent, as such, of vegetable or other foods taken at table; seeing that citric, malic, and other organic acids which are found distributed throughout the vegetable world are liable to chemical conversion into oxalic acid through a fermentation, or perverted digestion. The term "Sorrel Sops" was given to a fever-drink in the sixteenth, and seventeenth centuries. In Ireland fresh Sorrel leaves are eaten with fish, and other alkalescent foods. Applied externally, the bruised leaves will purify foul ulcers.

When dried the root has the singular property of imparting a fine red colour to boiling water; and it is therefore used in France for making barley-water look like red wine, when the object is to avoid giving anything of a vinous nature to the sick person. Sorrel leaves form by their acidity a capital resolvent dressing for taking with stewed lamb, veal, or sweetbread. The Purslane, related to the Portulaccas of Brazil, is used in equal proportion with Sorrel for making that excellent milk soup, *bonne femme.* For "Sorrel soup" (*Potage a l'Oiselle, Cordon Rouge*), wash, and pick the Sorrel, and cut it into fine shreds; melt the proper quantity of butter in a stewpan; peel, and slice enough onions, and carrots; dry the vegetables, and put them into the stewpan as soon as the butter is hot; stir over a brisk fire for about five minutes, taking care not to let the vegetables burn. Now add some flour, mix well, and moisten with the milk previously boiled, also a good

pint of water; stir until it boils, and then allow it to simmer for about half an hour; add pepper, salt, and nutmeg to taste. When done, rub the whole through a fine sieve, and return it to a clean stewpan. Mix your cream with yolks of egg, and add this to the soup as soon as it boils; stir long enough to bind the eggs, but avoid its boiling further. Stamp out some thin crusts of bread about the size of a shilling piece; pour the soup into a tureen, and serve with the bread-crusts put in at the last. Ingredients for the above: Sorrel, one pound; milk, one pint; flour, half an ounce; butter, three ounces; one small onion, one small carrot, two egg yolks, half a gill of cream, pepper, salt, nutmeg, and crusts of bread as directed. French chefs call Sorrel Soup "*Potage à la bonne femme*," perhaps because of its slightly acidulated flavour. Sweet things grow tiresome after a while: for which reason both women, and soup, should have a little spice of—let us not say acid—in their composition. Formerly, on account of its grateful acidity, a conserve of "luluja," or the "Alleluia" herb, *Wood Sorrel*, was ordered by the London College to be made from the leaves, and petals, with sugar, and orange peel. An anti-putrescent gargle is to be concocted against quinsy with the same parts of this plant.

The garden Rhubarb owes its bright red colouring to varying states of its natural pigment, *chlorophyll*, in combination with oxygen. For culinary purposes the petiole, or stalk of the broad leaf, is used. Its chief nutrient property is glucose, which is identical with grape-sugar. But the presence of oxalic acid makes these stalks as objectionable for gouty persons as is Sorrel, for the reason already explained. The garden Rhubarb also possesses albumin, gum, and mineral matters, with a small quantity of some volatile essence. The Turkey Rhubarb of medicine is likewise a Dock grown in Western China, and Thibet. Garden Rhubarb is anything but an invariably harmless article of vegetable diet, even for some persons who are not gouty, or with lime in their system. Its free use at table will now and again provoke in susceptible subjects, whether children, or adults, congestion of the kidneys, passage of bloody urine, nettle-rash, colic of the bowels, feverishness, and a general aching of the limbs. But it is chiefly Rhubarb of the rougher sort as grown wholesale for the markets, which thus disagrees, whilst the forced variety of cultivated garden produce does not give rise to such troubles, whether of the kidneys, or of the skin. This Rhubarb

contains 1 per cent of vegetable albumin, and 2 per cent of sugar (glucose). It may be moulded into a shape by passing it through a sieve, when cooked with sugar, and raspberry jam, of which latter a gill will suffice for a quart mould, colouring it a pretty pink, and using only just enough gelatine to set it. Rhubarb has the accommodating faculty of absorbing the flavour of other fruits, particularly of the raspberry. Ginger was long since held in repute as connected with Rhubarb. By adding two tablespoonfuls of preserved ginger (chopped very fine) with about the same measure of ginger syrup, and a dessertspoonful of brandy, to a quart of Rhubarb pulp for moulding, a revelation will be in store. For "Rhubarb wine," chop some stalks of garden Rhubarb coarsely, and to every quart add three quarts of water, then let it stand for two or three days; next strain through a cloth, and to every quart add one pound of sugar, either brown, or white. Let this remain in jars to ferment, skimming every day until the fermentation ceases; then bottle tightly. For "Rhubarb preserve," take twelve pounds of nice rich-coloured Rhubarb, skin very sparingly, wash well, and leave it in a little cold water; boil twelve pounds of sugar for quite half an hour, then put in the Rhubarb, skimming all the while; add plenty of lemon-parings, which can be taken out before potting. Two pints of water should be allowed to boil the sugar. This makes a nice nursery preserve. Again, for "Rhubarb as preserved ginger," make a syrup by boiling one and a half pounds of loaf sugar, with half a pint of water, and a good teaspoonful of ground ginger, until it is transparent. Cut two pounds of Rhubarb (for which purpose the green Rhubarb answers best) in pieces about one and a half, or two inches long, and put them into the syrup, which should be boiling, turning the Rhubarb occasionally, with care not to break the skin; when done it should be put into wide-necked bottles, and securely fastened down; it will keep thus for a long time. The root of English Rhubarb, if dried, and powdered, will answer in a milder degree the laxative purposes of Turkey Rhubarb. The fresh green leaves, when removed from the stalks, will come into service as an excellent and wholesome vegetable, if dressed like spinach, either with, or without some butter being added. The proportion of nutritive matters to the vegetable fibre in this plant is very small. We have no other herbal product of which it can be said the roots are used for physic, and the leaves in pies.

The herb Rue (*Ruta graveolens*), which is cultivated in our kitchen gardens, deserves passing mention as a useful medicament, though it scarcely comes into our culinary service with food. This shrub has a pungent aromatic odour, and a hot, bitter, penetrating taste, with leaves of a bluish-green colour which are ever green, and are so acrid that if they be much handled they inflame the skin. If a leaf or two of Rue be chewed, a refreshing aromatic flavour will pervade the mouth, and any nervous headache, giddiness, hysterical spasm, or cardiac palpitation will be speedily relieved. The most important chemical constituents of the herb are its volatile oil, which contains caprinic, pelargonic, caprylic, and œnanthylic acids, also oxygenated caprinic aldehyde. Gerarde says: "The Wild Rue venometh the hands that touch it, and will also infect the face; therefore it is not to be admitted to meat, or medicine." Nevertheless, it is not infrequently made into a tea (from the garden herb) in country districts. "Pliny," says Evelyn, "reports Rue to be of such effect for the preservation of sight that the painters of his time used to devour a great quantity of it; and the herb is still eaten by the Italians as frequently mingled amongst their salads." Again, Gerarde relates that this herb grows most profitably under a fig tree. Country people boil its leaves with treacle, thus making a conserve thereof. These leaves are curative of croup in poultry. During the early part of last century it was customary for our Judges, when sitting at Assize, to have sprigs of Rue placed before them on the bench of the Dock as defensive against the pestilential infection brought into Court from gaol (then altogether neglected as to its sanitation) by the wretched prisoners. A quaint old rhyme says of the plant:—

"Nobilis est Ruta
Quia lumina reddit acuta."
"Noble is Rue: it makes the sight of eyes both sharp and clear:
With help of Rue, oh! blear-eyed man! thou shalt see far and near."

This is especially the case when the vision has become dim through over-exertion of the eyes. It was with "Euphrasy, and Rue" that the vision of Adam in Paradise was purged by the Angel, according to Milton. Other popular names for the plant are Herbe grass, Herbigrass, and Horby grass. In Lincolnshire countryfolk say it must be given only in the morning, because as the afternoon supervenes it becomes

poisonous. "You know Herby grass is Herby grass in the morning, but *Rue* in the afternoon." Thornbury records the fact that in the England of Shakespeare's day "the tops were eaten with bread and butter of a morning to purify the blood."

Closely allied to the Water-cress (already noticed, p. 226), is another herb which, if eaten in its fresh state, as a salad, is the most effectual of all our antiscorbutic plants; its leaves, moreover, being admirable for curing swollen and spongy gums. This is the Scurvy Grass, or Spoon-wort (*cochleare*), the famous *Herba Britannica* of the ancients. It may be readily cultivated in the garden for medicinal uses by the cook. Naturally it grows by a preference near the sea, but even when found many miles inland, its taste is still salt. Along the banks of the Avon, in Cumberland, in Wales, and on Scotch mountains, the Scurvy Grass grows wild in abundance. The leaves are wholesome, and purifying when eaten in the spring with bread and butter. The whole herb contains tannin, and a bitter principle, which is butyl-mustard oil, whereon the medicinal properties depend. This oil is of great volatility, and penetrating power; one drop of it instilled on sugar, or dissolved in spirit, will communicate to a quart of wine the special taste and smell of the Scurvy Grass. Formerly, the fresh juice of this herb, when mixed with that of Seville oranges, went by the name of "Spring drink." Also the juice was taken in beer, or boiled with milk, being flavoured with pepper, aniseed, etc.

The beneficial uses of the plant in scurvy are mainly due to its plentiful salts of potash. This green herb bruised, if applied as a poultice, will cleanse and heal foul sores. For making a decoction of the herb, put two ounces of the whole plant, bruised, with its roots, into a quart jug, and fill up with boiling water, taking care to keep the infusion closely covered. When it is cold, take a wineglassful three or four times during the day.

Likewise the Southern-wood, (*Southern Wormwood,*) another aromatic herb of the kitchen garden, though now fallen into culinary disuse, was at one time made into a conserve as to its young tops, with three times their weight of sugar, and was given beneficially against hysterical disorders. This, the *Artemisia abrotanum*, is popularly known in the garden as "Old Man," or "Lads' Love." A tea infused from it, not too strong, famously promotes perspiration. The branches will dye wool a deep yellow. The plant has a lemon-like odour,

and a bitter, fragrant taste; its name *abrotanum* signifies having delicate fibres—*abros*, delicate; *tonos*, a fibre. "Old Man" signalizes its use, advised by Pliny, and as explained by Macer:—

> "Hæc etiam venerem pulvino subdita tantum
> Incitat."

Pliny says further that this herb is potent against syphilis. Its lemon-like odour depends on the essential volatile oil "absinthol." The other appellation of the plant "Lad's love," has been given because of an ointment being made with its ashes for use by youngsters towards promoting their growth of a beard. *Cinis abrotani barbam segnius tardiusque enascentem, cum aliquo dictorum oleorum, elicit.* The Southern-wood (in Lincolnshire, Mother-wood"), is hostile to moths by its presence, and hence is derived one of its French names, *garde robe.*

Akin to Spinach (*p.* 108), is the pot-herb, Good King Henry, another Goosefoot, known also as an English Marquery, or Mercury; furthermore, it bears the name of "allgood," from a rustic conceit that it will cure all hurts. "Wherefore the leaves are now a constant plaster among countryfolk for every green wound." This plant is grown by cottagers, particularly in Lincolnshire, for a pot herb. Its young shoots, peeled, and boiled, are eaten as asparagus, being gently laxative. The young leaves are often put into broth, being also cooked as a vegetable after the manner of spinach, and without its earthy taste. Each of these affords soda in abundance. The Good King Henry grows plentifully on waste ground near villages, being a dark green plant, about a foot high, with thickish, arrow-shaped, succulent leaves, the taste of which, says Evelyn, is "insipid enough." Because of its excellent remedial qualities against biliary disorders, this herb bears its title English Mercury, carrying into effect the pertinent proverb, "Be thou sick, or whole, put mercury in thy koole." Poultices made from the leaves are applied to cleanse, and heal chronic sores, which, as Gerarde teaches, "they do scour, and mundify." The epithet "Henricus," which some persons suppose to be associated with Harry the Eighth, and his varicose legs, is more likely derived from "heinrich," an elf, or goblin, as indicating certain reputed magical virtues in the plant. This has a somewhat mealy appearance, and produces seeds useful for expelling round worms.

Familiar both in our gardens, and about our hedgerows, is the herb Tansy (*tanacetum vulgare*), conspicuous by heads of flat brilliant yellow flowers. Its leaves have a smell of camphor, and possess a bitter, aromatic taste; whilst young they were used commonly in times past, and they are still employed, when shredded, for flavouring cakes, puddings, and omelettes. This herb contains a resin, with mucilage, sugar, a fixed oil, tannin, a colouring matter, malic, or tanacetic acid, and water. Meat rubbed with the bitter Tansy will be protected from visitation by carrion flies. In Scotland, the dried flowers are given for gout: from half to one teaspoonful for a dose two or three times in the day; or an infusion is made therefrom to be drunk as tea. This has kept inveterate gout at bay for years. With us the plant has a rural reputation for correcting irregularities of the female functional health. The name Tansy is probably derived from the Greek word *athanasia*, which signifies immortality; either "*quia non cito flos inflorescit*," because it lasts so long in flower, or "*quia ejus succus vel oleum extractum cadavera a putredine conservat*," because it is of such service for preserving dead bodies from corruption. It was formerly an English custom at Easter for Archbishops even, for bishops, and the clergy of some churches, to play at hand-ball with men of their congregations, when a Tansy cake was given as a reward to the victors, this being a confection with which the bitter herb Tansy was mixed. Some such a corrective was thought to be of opportune benefit, after having lived much on fish throughout Lent. The Tansy cake was made from young leaves of the herb mixed with eggs.

"This balsamic plant," said Boerhaave, "will supply the place of nutmegs, and cinnamon." Allied thereto is another old English herb, now almost obsolete, except in Lincolnshire, to wit "Costmary," known there locally as "mace." It is the "*Tanacetum balsamita*," or "alecoast," (so named because "put into ale to steepe"). "The conserve," says Gerarde, "made with leaves of costmaria and sugar doth warme, and dry the braine, and openeth the stoppings of the same; stoppeth all catarrhes, rheumes, and distillations, taken in the quantitie of a beane. The leaves of costmarie boyled in wine and drunken, cure the griping paine of the belly, the guts, and bowels, and cureth the bloudy flix." The whole plant is of a pleasant smell, savour, or taste. Some of the villages near the city of Lincoln, for example Burton, and its neighbouring hamlets, are singular

in retaining for kitchen use, or for curative purposes, certain old English herbs, wellnigh forgotten elsewhere in the land, such as this excellent Costmary, Bergamot, and the Goosefoot Spinach, Good King Henry.

In Continental cookery the use of a fragrant kitchen-herb, the Tarragon, not so common in England, is advised "to temper the coldness of other herbs in salads, like as the Rocket doth. Neither do we know what other use this herb hath." But Tarragon (*Artemisia dracunculus*) is gaining favour with ourselves, especially for making an aromatic vinegar therewith. Furthermore, fresh Tarragon possesses an essential volatile oil, which becomes lost in the dried herb. John Evelyn has said of the plant, "'Tis highly cordial, and friendly to the head, heart, and liver." French cooks usually mix their table mustard with the vinegar of this herb, which is sexually stimulating; the leaves make an excellent pickle. The volatile essential oil of Tarragon is chemically identical with that of Anise, and it is found to be stimulating to the generative functions, probably by virtue of its finely-elaborated camphor. For making Tarragon vinegar: Fill a wide-mouthed bottle with Tarragon-leaves fresh gathered, *i.e.*, between Midsummer and Michaelmas, (plucking these on a dry day, just before the herb flowers). Pick the leaves off the stalks, and dry them a little before the fire; cover them with the best vinegar; let them steep for fourteen days, then strain through a flannel jelly-bag till fine; put it into half-pint bottles, and cork. Various other delicate vinegars for the table are much appreciated abroad, such as printemps, syringa, menthe, etc., the foreign cook being most fastidious as to the vinegar which he (or she) uses. The best white wine, or red wine vinegar, alone gives satisfaction, and this the cook personally flavours by infusing in it various herbs, or plants, either separately, or in combination. A good vinegar with us is made from the fruit acids of apples, or grapes; ordinarily it is got from sour beer, as malt vinegar. The test advised by the College of Physicians for insuring the integrity of British vinegar, is a solution of one part of chloride of barium to eight parts of water. Ten drops of this should serve to precipitate all the sulphuric acid permissible in an ounce of lawful vinegar. If, after this precipitate has settled down, the test solution still continues to form a cloud, such sample of vinegar ought not to be used in the preparation of food.

The French have a proverb, "*On prend plus de mouches avec une cuillerée de miel qu'avec un tonneau de vinaigre; (on réussit mieux par la douceur, que par la hauteur, et la fierté)*"—"Gentleness goes further than harshness, or severity."

Garden Thyme, a cultivated form of Wild Thyme (*Thymus serpyllum*, or "creeping"), is a familiar denizen of our kitchen herb-bed, being put into seasonings, stuffing, and sauces. It has a very fragrant odour, and a pungent, aromatic taste, because of its essential volatile oil, which consists of two hydrocarbons, with thymol as the fatty base, this thymol taking high modern rank as an antiseptic. It will arrest gastric fermentation when given judiciously as Thyme tea; also when applied externally Thymol will disinfect, and destroy the germs which characterize several forms of skin disease. The Oil of Thyme is known commercially as Oil of Origanum. Thymol is the basis of the fragrant volatile Essence of Sweet Thyme. By mixture with spirit it makes an admirable antiseptic remedy for inhalation, on absorbent cotton-wool within a respirator for the purpose. Thyme oil is of equal service with tar for treating such skin affections as psoriasis, and eczema. When inhaled it is most useful against septic sore throat, especially during scarlet fever. For curing ringworm in children, an ointment made with one drachm of Thymol, and one ounce of soft paraffin, is found to be a sure specific. To "smell of Thyme" was a former panegyric bestowed on writers who had mastered the Attic style. Dr. Neovius has told enthusiastically in Finland about the paramount virtues of Common Thyme for combating whooping-cough. He has found that the pounded herb, if given fresh, from one to six ounces a day, mixed with a little syrup, regularly for some weeks, is practically a specific cure. If it be taken from the first, then the most active symptoms become much modified in two, or three days, and in a fortnight the disease is expelled. The simplicity, harmlessness, and cheapness of this homely remedy go far to commend its use. Thyme, again, bears the appellation "Mother of Thyme" in allusion to its beneficial uses by women. "*Serpyllum matricem* (womb) *comfortat, et mundificat*"; being called also in Latin "*Matris animula, quod menstrua movet.*" Thyme tea is good against nervous headaches, hysterical troubles, flatulence, and the headache which follows inebriation. "A conserve made from the flowers and leaves of Thyme, relieves those troubled

with the falling sickness." "Thyme boiled in wine, and drunk, is good against the wamblings, and gripings of the belly." That the herb was esteemed to be antiseptic in classic times, we learn from Dryden's *Virgil*, in the Georgics :—

> "But if a pinching winter thou foresee,
> And would'st preserve thy famished family,
> With fragrant thyme the city fumigate."

Among the ancient Greeks, Thyme was an emblem of bravery, and energy. With a similar notion, the ladies of England's chivalry embroidered on the scarves which they presented to their doughty knights, the device of a bee hovering about a sprig of Thyme, as teaching the union of the courageous with the amiable.

A fragrant and exhilarating tea may be made from the leaves and blossoms of the Sweet Woodruff, the same proving useful for correcting sluggishness of the liver. This (the *Asperula odorata*) is a favourite little plant which grows commonly in our woods, and gardens, possessing a pleasant odour, which, like the good deeds of the worthiest persons, delights by its fragrance most after death. The herb is of the Rubiaceous order, and derives its botanical adjunct from the Latin word *asper*, rough, in allusion to the rough leaves owned by its species. It may be easily recognized by the small, white flowers set on slender stalks, with narrow leaves growing around the stems in successive whorls. The name Woodruffe has been whimsically spelt Woodderowffe, thus :—

> Double U, Double O, Double D, E,
> R, O, Double U, Double F, E.

Its terminal syllable *rofe* signifies a diminutive wheel, or rowel, like that of an ancient spur; and therefore the plant is known also as Wood-rowel. When freshly gathered it has but little smell, but on being dried it exhales a charming, and enduring aroma, like the sweet scent of meadow grass, or of peach blossoms. This agreeable fragrance is due to a chemical principle, "coumarin," whilst the herb further contains citric, malic, and rubichloric acids, together with some tannic acid. The small verticillate leaves of this Woodruff serve to remind us of good Queen Bess, and the high, starched, old-fashioned ruff which she used to wear, as shown in her portraits.

Wormwood (*Artemisia absinthium*)---see also page 16—has been grown in the herb garden for many years past because of its benefit, when judiciously used, as a nervine tonic, particularly helpful against the falling sickness, and for flatulent indigestion. The extremely bitter taste of this herb has given it a name—"*a*" negative, *psinthos*, delight, because of its being nauseous to a distressing degree. Wormwood tea will serve to relieve bilious melancholia, and will help to dispel the yellow hue of jaundice from the skin. The characteristic odour of the herb is due to a volatile oil which consists mainly of "absinthol; and the intensely bitter taste resides in its "absinthin." The plant also contains tannin, resin, starch, with succinic, malic, and acetic acids, together with nitrate of potash, and other salts. In some districts it is popularly known as "Green Ginger." The leaves of Wormwood resist putrefaction, and therefore help to make capital antiseptic fomentations. Gerarde says: "The plant voideth away the worms, not only taken inwardly, but applied outwardly; it withstandeth all putrefactions and is good against the stinking breath." For making Wormwood tea, an ounce of the plant should be infused for ten, or twelve minutes in a pint of boiling water, and then a wineglassful be given at a time for a dose. Absinthe, a liqueur concocted mainly from Wormwood, is used largely in France, but with mischievous results through infatuated excess; yet curative virtues attend its judicious administration.

"These for frenzy be
A speedy and a sovereign remedy:
The bitter wormwood, sage, and marigold."
FLETCHER, *Faithful Shepherdess.*

In the words of Bergius, "Wormwood is antiputredinosa, antacida, anthelmintica, resolvens, tonica, stomachica." Tusser, in his simple, homely rhyme, has expressed this notion thus:—

"What savour is better, if physic be true,
For places infected than Wormwood and Rue?
It is as a comfort for heart, and for brain,
And therefore to have it, this is not in vain."

Dioscorides affirmed that Wormwood is a preventive of intoxication, and an antidote against its ill-effects; indeed, the "*Poculum absinthiatum*" has long been a favourite beverage. The leaves and tops were infused in ale, and then formed a favourite liquor

known as purl. This term Wormwood seems to be also connected with a property of expelling worms. The smell of common Wormwood is very refreshing, and its reviving qualities in heated courts are almost equal to a change of air.

As a result of his experiments on animals, Dr. Maignan concludes that Absinthe (concocted from Wormwood) determines tremblings, dulness of thought, and epileptiform convulsions, if it be taken habitually, or to any excess; and these symptoms will not be produced by alcohol alone. Hence it is to be inferred that Absinthe contains really a narcotic poison, which should prevent its being employed as a dietetic liqueur, or as an indulgence, with any freedom. The French have been drinking their "Amers" for many years, and an infernal concoction it is. "This habit," said Daudet, "was acquired by the French soldiers in Algeria, and Tunis, during the wars there, and was brought back by them to their own country; before which wars the French were a very sober people." Dr. Laborde attributes the special dangers of drinking Absinthe to the various essences which are added to the alcohol (of 70 per cent strength), such as essence of absinthe, of china anise, and of benjamin; fourteen distinct poisons entering into the composition of the superior Absinthe liqueur which is retailed at the best cafés. "Absinthe has not become common so far with the people in England, but it will do so before long if the growing evil be not promptly checked; the importation of Absinthe into this country should be stopped before such a prohibition becomes too late."

Sixty or seventy years ago the Mugwort of our hedgerows, and waste grounds, which is closely allied to Wormwood, (but lacking the volatile essential oil thereof), had its dried leaves substituted for tea of foreign growth by the working classes in Cornwall. Tea itself then cost seven shillings a pound, and was therefore afforded by them only for use on very special occasions, one being when there was an increase in the family. Sometimes a burnt crust of cake was got as a substitute for tea, either from the Squire's Hall, or the Vicarage, or a farmhouse, and an infusion called tea was brewed from this; or a charred crust of wheaten bread, when it could be had, sufficed for a day or two to concoct the brew. The flesh of geese is declared to be more savoury when stuffed with Mugwort (which contains "*absinthin*," and is scentless). The Mermaid of the Clyde is said to have exclaimed

when she beheld the funeral of a young maiden who had died from consumption, and decline :—

> " If they wad drink Nettles in March,
> And eat Muggins (Mugwort) in May,
> Sae mony braw young maidens
> Wad na' be gang to clay."

HERRING (*See* FISH).

DRYDEN (in his *Duke of Guise*) has immortalized the Herring by a couplet descriptive of neutral persons or trimmers, belonging to no party, or sect, in particular, and without decision of character :

> " Damned neuters in their middle way of steering,
> As neither fish, nor flesh, nor good red herring."

Pepys (*Diary*, April 2nd, 1669) tells how " his friend, Mr. Fowkes, did make him eat a pickled Herring, the largest I ever saw, and drink variety of wines till I was almost merry."

HOMINY.

AMONGST various preparations of maize, or Indian corn, Hominy takes a useful place as a medicinal nutriment. It is the maize broken or split into a preparation of high nutritive value, containing eight per cent of proteid, and seventy-eight per cent of carbohydrates. Maize, though not used largely in this country, is literally the " staff of life " in Mexico, and Natal. It is fully as nourishing as wheat in all its parts, except as to its mineral ingredients, whilst richer in fat than any cereal besides oats. The *johnny* (journey) cakes of North America are made of maize-meal unleavened. This cereal is readily digested in the human body, but its corn flour is little more than starch, because the proteid and fat have been washed away by alkaline solutions. *Per contra*, the maize itself as Hominy is highly supporting for brain workers, for persons whose daily avocations demand a considerable amount of physical exertion, and for sufferers from general dyspepsia. To dress this as a vegetable, soak the grains for several hours in cold water sufficient to cover them, then strain off the liquid. Empty the meal into a saucepan containing plenty of fast-boiling water, to which some salt (in the proportion of one and a half dessertspoonfuls to each half gallon) has been

added, and cook it for from three and a half to four hours. with an occasional stir, to prevent it from sticking to the bottom of the pan, and getting burnt. Drain carefully, and stir in a small piece of fresh butter about the size of a walnut; pepper slightly, and send to table very hot in a well-heated dish. Hominy porridge may be made also with the meal, first soaked as directed above, to be eaten with milk, and sugar, golden syrup, or salt.

HONEY.

THE name Honey has been derived from the Hebrew word *ghoneg*, which means literally "delight." In the Book of Genesis it stands stated that the pleasant Land of Canaan, where Abraham dwelt, was "flowing with milk and honey." Rumilius Pollio, who enjoyed marvellous health, and vitality, in ancient Rome, was presented when over a hundred years old to the Emperor Augustus, who enquired what was the secret of such wondrous longevity. Pollio answered, "*Interus melle, exterus oleo,*" the eating of honey within, and anointing by oil without. Such Honey is the nectar of flowers, partaking closely of their flavours and odours, whilst varying in taste, colour and scent, as well as in medicinal attributes, according to the species of plant from which it is gathered. Pure Honey consists, when collected from the comb of beehives, partly of crystallised glucose, which sinks to the bottom of the jar, and partly of a liquid portion above, which is fruit sugar, or lævulose, almost identical with the brown syrup of the sugar cane, but less easy of digestion. The glucose is analogous to grape sugar, all ready for direct absorption into the blood, after being eaten, whereas cane sugar must be first masticated in the mouth with the saliva, and become converted somewhat slowly into honey-sugar before it can be similarly utilized for the wants of the body. In this way the immediately nutritive properties of Honey beyond those of cane sugar are made manifest; and it can be understood with equal readiness why grapes, identical with honey in the matter of their sugar, have a speedy effect to meet the outgoings of waste by fever, or fatigue, straightway with reparative elements ready made, instead of by a roundabout conversion, as with cane sugar. The odour of honey is due to a volatile oil, associated with a yellow colouring matter, *melichroin*, which is separated by the floral nectaries, and becomes bleached on exposure to

the sunlight. A minute quantity of an animal acid lends additional curative value of an antiseptic nature to honey. Pure Honey contains of glucose about twenty parts in one hundred, but being deficient in lime, and in iron, it cannot be considered a perfect food; nevertheless, mothers would certainly be wise to make a free use of it in the nursery, and it should appear more constantly on the general breakfast table. Essentially it is a solution of dextrose, and lævulose, with volatile oils, and occasionally some cane sugar. Virgin honey is that which flows spontaneously from the comb when the cells are uncapped from the hive. Wild honey is the product of bees in their wild state, or when not kept by man. King Solomon said in his wisdom, "hast thou found it? Eat no more than is sufficient, lest thou surfeit; for it is not good to eat much honey" (Proverbs xxv. 16).

It was Aristœus, a pupil of Chiron, who first gathered Honey from the comb; and this was the basis of the seasoning of Apicius; whilst Pythagoras, who lived to be ninety, took latterly only bread and honey. Tacitus tells that our German progenitors gave credit for their long lives, and their great strength, to the mead, or Honey-beer, on which they regaled themselves. "Whoever wishes," said an old, and classic maxim, "to preserve his health should eat every morning before breakfast young onions with honey."

> "There was an old man of Kilkenny
> Who never had more than a penny:
> He spent all that money in onions and honey,
> That knowing old man of Kilkenny."

Seeing that good honey contains heat-forming sugar, which is so very quickly assimilated and taken up into the blood, some combination therewith of other food less easily absorbed is generally desirable; otherwise the digestion may be upset by too speedy a surfeit of bodily caloric, and energy. Thus the bread and honey of time-honoured memory is a sound form of support, as likewise the traditional milk and honey of the Old Testament Canaan. Such a food may be prepared by taking a bowl of new milk, and breaking into it some light wheaten bread, together with some fresh white honeycomb. The mixture will be found both pleasant, and light of digestion. As a heat producer by way of food, one pound of honey is equal to two pounds of butter; and it may sometimes be beneficially substituted for cod-liver

oil, when this cannot be tolerated by the patient. In coughs and colds Honey makes a useful adjunct to other expectorants, whilst being at the same time helpfully laxative. Samuel Pepys tells in his diary (1660), "Rode to Huntsmore, and here I lay; took a spoonful of honey, and a nutmeg, scraped, for my cold, by Mr. Bowyer's direction." Nevertheless, when it is old, honey will at times cause indigestion through an excessive production of lactic acid in the stomach, and some superficial soreness within the mouth will ensue; it being at the same time familiarly known that honey (particularly if mixed with some borax), will quickly cure a state of thrush in the mouth ensuing through other derangement of the health. In a *Song of Sixpence*, as asked for by Sir Toby Belch, (*Twelfth Night*),

"The Queen was in her parlour
Eating Bread and Honey."

"Mel mandit, panemque, morans regina culinâ,
Dulcia plebeia non comedenda nuru."

(Black currant jelly in teaspoonful doses is useful for a child when suffering from thrush and a sore mouth. The fruit possesses a volatile bitter oil, residing chiefly in the skins, this oil giving its aromatic flavour to the berries.) A plain cake of currants, or seed, made with Honey in place of sugar, is a pleasant addition to the tea-table, and a useful preventive of constipation. Among the ancient Germans, Honey from the sacred ash was the first food put to the lips of a new-born babe. Likewise in the Scotch Highlands, at the birth of a child, the mother will take a green stick of ash, one end of which she thrusts into the fire, and while it is burning she will receive in a spoon the sap which oozes out from the other end of the stick, and will give this to the infant as its first food. Such is the kind of honey secreted by plants. Another sort is the product of leaf hoppers, or plant-lice (especially the Pulvinaris) which extract the sweet sap from the trees, and elaborate it within themselves into honey dew, or honey rore.

"Yet where these hops and honey fall
We'll lick the syruped leaves,
And tell the bees that their's is gall,
To this upon the greaves."

DRAYTON (*Boughs and Branches*).

Our ancestors concocted from honey boiled with water and

exposed to the sun, (after adding chopped raisins, lemon-peel, and other condiments), a famous fermented drink called mead, or (when the finer honey is used) metheglin, combining certain herbs so as to confer special flavours. In *The Closet Opened*, of Sir Kenelm Digby, knt. (1645), is given a recipe for the metheglin of Sir Thomas Gower, then Marshal of Berwick. "Five gallons of Honey to be poured into forty of small ale, and while still warm to be stirred exceedingly well with a clean arm till they be perfectly incorporated." Likewise the old Teutons prepared a Honey wine, and made it a practice that this should be drunk for the first thirty days after marriage by a newly wedded pair, from which custom has been derived the familiar honey-moon, or the month after the wedding. Sometimes hops and yeast were also employed for making mead. In the present day, cottage beekeepers about Hampshire, and elsewhere, compound a homely sort of mead from odd pieces of comb, with refuse honey, and from the brood left therein after having taken their bees in the autumn. This ferments of itself by reason of the pollen in the combs; and the Honey beer, or Hum, as the cottagers call it, has been found to contain a valuable curative principle derived from the poison of bee stings, and proving of specific use against dropsical effusions, erysipelas, and nettlerash, also for certain forms of sore throat. Cases can be reliably adduced of a lasting cure thereby to cardiac dropsy, which was extreme, likewise of hydrocephalic effusion in children, and of dropsy from suppressed action of the kidneys. The sting of a bee or wasp will sometimes inflict a shock on the heart, even fatal in its results, by rapid absorption of the poison. The stinging secretion ejected from the poison gland of bees is chiefly formic acid (which is known to exercise considerable antiseptic effects). This is found to be present in well-preserved honey, but not in freshly gathered nectar: evidently it has been added by the bees to help preserve the honey. The said sting-poison contains three principles, one convulsive, one stupefying, and one which excites inflammation; thus the extraordinary fact appears that the poison embodies two ingredients, one of which is opposed to the other. When a person is stung within the throat by a bee or a wasp, the best thing to do is to chew an onion, keeping the pulp at the back of the mouth, and swallowing it slowly; thereby swelling of the throat becomes prevented. Calverley describes in humorous lines the "bottling of wasps," by a gardener:—

"He hath found an old bottle, I cannot say where,
He hath bound it with skill to the back of a chair,
Full of mild ale so balmy, and sugar so brown,
And he'll trap them by dozens, I'll bet you a crown."

As to "Mum" or "Hum," writes Harrison (1600) in his *History of England*, "there is a kind of swish swash made also in Essex, and divers other places, with honeycomb and water, which homely country wives putting some pepper among, and a little other spice, call "mead." Very good in mine opinion for such as love to be loose-bodied at large, or a little eased of the cough; otherwise it differeth as much from the true metheglin as chalk from cheese. Truly it is nothing else but the washings of the combs when the honey is wrung out, and one of the best things that I know belonging thereto is that they spend but little labour and less cost in making of the same, and therefore no great loss if it were never occupied." Hum was so named, most probably, from its causing a buzzing, or humming, in the head.

"Lord, what should I ail!
What a cold I have over my stomach; would I had some Hum!"
FLETCHER (*The Wildgoose Chase*).

In the thirteenth century a certain mixture of Honey and water was used for applying to "a stynkynge wounde, to be washed with, that is honey and water sodden together with mirre."

When England was Roman Catholic, a superior mead was brewed from pure new honey, beekeeping being then a profitable business owing to the demand for the beeswax wherewith candles might be manufactured for the religionists; honey was therefore plentiful, and could be readily had for making the best liquor. Then came the Reformation, bringing discouragement and depression to the apiary; and beer from barley was in vogue, the mead being superseded. But the cottage mead is to-day just what it was when Wamba the son of Witless had it for his supper. For making superior "white mead": To every gallon of water put a pint of the best Honey, and half a pound of loaf sugar, stir in the whites of eggs—three or four to the gallon,—beat to a froth, and boil it as long as any scum arises; when it is cold, work it with yeast, and to each gallon put the juice and peel of a large lemon; stop it up when it has done working,

and bottle it after ten days. An old and musical name for mead was hydromel. More recently as we read—

> "When the young players get to Islington
> They fondly think that all the world's their own:
> Where many a man at variance with his wife
> With soft'ning mead, and cheese-cake ends the strife."
>
> *Art of Cookery*, 1708.

Beeswax consists chemically of myrosin, cerolein, and cerotic acid. Mrs. Earle quotes Dr. Dabbs, of Shanklin, concerning the cure of troublesome corns with beeswax. An old wife when on her deathbed communicated to the said doctor this wonderful cure, for which she had obtained a local notoriety in the Isle of Wight. "For curing karns," said she, "you takes beeswax, and you drops it hot right on the karn, and covers 'un; then yo' puts on a bit of swealed rag, and lets 'un set for fower days; then you pulls 'un out after you've a soaked your foot in water hot enough for ye to bear; and when ee's out you'll see a big hole where 'ee was." It may be observed that Dr. Haig has shown that simplicity of diet will do much to prevent, and cure corns.

To prepare a Honey Cake: Take half a breakfastcupful of brown sugar, one breakfastcupful of rich sour cream, two breakfastcupfuls of flour, and half a teaspoonful of carbonate of soda in powder, adding honey to taste. Mix the sugar and cream together, dredge in the flour with as much honey as will flavour the mixture agreeably; stir well, that all the ingredients may be thoroughly mixed; add the carbonate of soda, and beat the cake well for five more minutes; put it into a buttered tin, and bake for from half to three quarters of an hour; it may be eaten warm. For making Honey Cakes at the Cape: One and a half pounds of flour, half a pound of sugar, three quarters of a pint of honey. Boil the sugar and honey together; add one teaspoonful of cloves, and two teaspoonfuls of cinnamon pounded; then remove these from the fire; add half an ounce of potash, and one tablespoonful of brandy; mix the flour with half a teaspoonful of soda; then mix the hot syrup and flour well together, working the dough thoroughly with the hands, and roll out thinly. Put into a buttered pan, and bake in a slow oven for from half to one hour, and cut into squares. Preserved citron cut into strips, and mixed with the dough, improves the flavour. These cakes will keep for some time.

Honey, as explained by Dr. Hutchison, is richer in sugar than any malt extract, and is preferable thereto, besides being cheaper. To be used for medicinal purposes "kowno" honey, produced in the linden forests of Lithuania, is the most famous.

HOPS (*See* HERBS).

HORSE-FLESH.

AT the Langham Hotel, London, in February, 1868, a banquet of Horseflesh was given, with the view of testing the culinary merits thereof, and its nutritive capabilities. The verdict on a roasted horse-joint at that time was : This flesh leaves a pungency on the palate, as does likewise the horse-tea, which was proposed instead of beef-tea for the hospitals. Baron Larry, the eminent French surgeon to Napoleon I, had great faith in bouillon made from horse-beef, and he gave this to the wounded soldiers in all his campaigns. During the French Revolution, the populace were fed for six months on the flesh of horses, and no harm resulted, though loud complaints were made against it. Thirty thousand horses were killed and eaten in Paris alone during 1901, and there are now in that city two hundred and fifty horse-butchers' shops. The meat is coarse, and ill-flavoured, yet the taste for it steadily grows, mainly perhaps because this meat is cheaper than beef ; but, unless the people approved of it, they would not consume it so widely, on the score of cheapness alone. Its colour is darker than that of beef, and it has a distinctively less acceptable odour. After standing for some time, it develops a peculiar soapy feeling to the touch, with a sickly smell ; and its surface assumes a characteristic iridescent appearance. The horse fat contains a specially abundant quantity of the fatty acids.

One fact connected with the use of horse-flesh as an article of human diet, which, besides other considerations, is likely to interfere with its general adoption, finds proof through the Pampas Indians, who habitually live on mare's flesh, and who exhale a peculiarly disagreeable, sickening stench. "You smell like an Indian," has been overheard in a ball-room, as a young lady's reason for not dancing with a distinguished General who had been dining off mare's flesh.

It is said authoritatively that the common repugnance to Horse-flesh as human food cannot be logically defended, if one

considers the careful and cleanly habits of this quadruped, and compares them with those of the pig, which disgusts nobody, save the Jews. To conclude that the root of objection to Horse-flesh as food for man is of a religious character is new to most of us, but the fact has much to commend it. Our Scandinavian forefathers appreciated Horse-flesh highly; they sacrificed white horses annually to Odin, the priests and people feasting royally on the flesh afterwards; so that Horse-flesh banquets acquired a religious significance, which led to their being subsequently interdicted with stern aversion by the early preachers of Christianity. Thus, it is alleged, was created a prejudice which time has not even yet eradicated. But of late Professor Pflüger has been making extensive experiments with Horse-flesh, in order to test its nutritive, and other properties. His decision on the subject is very clear. He declares emphatically his conclusion that Horse-flesh is injurious to everyone who eats it. He is convinced that it is almost, if not altogether, deficient in true nutritive properties; and he avows that, so far from being fit food for man, Horse-flesh is not desirable sustenance even for animals (dogs, for instance), containing as it undoubtedly does a certain poisonous substance, the exact nature of which is not yet determined.

In *Alice through the Looking Glass*, the Rocking-horse fly (made of wood) is said to live on sap, and sawdust; whilst the Snap-dragon fly (made of plum pudding, with wings of holly leaves, and for its head a raisin burning in brandy,) lives on frumenty, and mince pie, making its nest in a Christmas box.

HORSE-RADISH (*See* HERBS).

PEPYS records in his diary, on September 16th, 1664, "met Mr. Pargiter, and he would needs have me drink a cup of Horse-radish ale, which he and a friend of his, troubled with the stone, have been drinking of, which we did." Pepys himself had been successfully cut for the stone six years before, on March 26th, 1658.

ICE.

ENORMOUS quantities of frozen meat are now brought over to this country from America, New Zealand, and Australia. A chamber on board ship is specially kept cool throughout the

voyage by means of Ice. The carcases of mutton, and beef are put into the said chamber, when newly killed, and are kept shut up therein until the vessel discharges its cargo in this country. Owing to the slow continuous action of the sarcolactic acid, meat which has been frozen is often exceptionally tender. On the other hand, through the loosening of the inter-muscular tissue, bacteria can more readily penetrate into the interior of the thawed flesh, and thus bring about more rapid decomposition. Considerable care is required in the thawing, since if this be done too suddenly, the meat when cooked will be wanting in flavour. Putrefactive bacteria at low temperatures do not decompose the proteids of flesh. Nevertheless, stored meat frequently acquires a mouldy flavour because of certain bacteria which are found to swarm on the walls of the cement-lined storage chambers when moist. Frozen meat may be known from fresh meat because of having less juice, and being of diminished redness. The liquid, moreover, when a piece of frozen meat is put into water in a test tube, becomes coloured much more rapidly and intensely than when fresh meat is used. Again, the blood corpuscles in meat frozen to ten degrees below zero, are found under the microscope to have become ruptured.

There are various machines by which artificial ice can be produced, even at the rate of six tons daily from each (American) machine. Most of the Ice used in commerce now-a-days comes to us from Norway. As to its purity for taking internally, we may derive comfort from knowing that bacilli, as of typhoid disease, become destroyed to the extent of 90 per cent by a temperature rather above the freezing point of water; and in Ice itself some 90 per cent of any such bacilli as may be included die out during the first twenty-four hours. This amounts to a purification of 99·9 per cent, a most successful filtration; and we may therefore conclude that natural Ice cut out so as to avoid the uppermost layer is comparatively harmless as regards risk of typhoid-poisoning, or the like. Small pieces of such ice, when slowly sucked, will serve to arrest bleeding from the stomach, or lungs, whilst at the same time pounded ice is kept externally applied in a bladder, or a waterproof bag.

Confectionery Ices are said to have been introduced by Catherine de Medici in the sixteenth century. They are made as water ices, and cream ices, (though these latter frequently consist of corn flour and milk, being entirely innocent of cream);

flavouring essences, or fruits are added. Such ices should not be eaten with other food, because they tend to retard digestion, neither immediately after a person has taken violent exercise, or when very hot. Such, for instance, as

> "Glacies,
> Lac miro quodum sapore imbutum,
> Nix ceresina, dentes tentatura."
>
> *Oxford Menu.*

Much of the dyspepsia to which many American citizens are subject is mainly attributable to their custom of taking iced water with hot bread, or biscuit, likewise iced cakes in abundance. The first sweet Ices in Paris were placed before the subjects of Louis XIV by a coffee-house keeper in the Rue de l'Ancienne Comédie.

The remedial uses of ice medicinally need scarcely be recapitulated, as they are so well known; whether to help arrest internal bleeding by sucking small pieces of the Ice, or to relieve persistent vomiting, or to allay feverishness, and quench thirst rather than by copious drinking. Also the external applications of Ice for subduing local congestions, for cooling inflamed parts, and for neutralizing pain by a judicious employment thereof, are familiar to all whose office it is to care for sick persons. Likewise snow has been long made available for cooling drinks, even from the days of Hippocrates, and Seneca. Custard ices are valuable as being easy to digest, and containing light nourishment, whilst cooling the tongue, stomach, and body in general. The Germans call white of egg when frothed "Snow." In winter time, when actual pure snow covers the ground, some of this may be advantageously employed for making pancakes instead of using eggs for the purpose. Take four dessertspoonfuls of flour, and two of snow, mix well together, then add cold water enough to make it into a very stiff batter. Fry quickly in boiling friture, and serve hot, with spiced sugar and lemon juice.

Recently a Swiss physician has been treating certain nervous disorders successfully by administering in a systematic way tea made with melted Snow. Near Munich, at Worishofen, there is now an establishment where patients of inactive blood-circulaton, and of languid functions, are managed with considerable success by the "Snow cure." At regular times they are set to walk about, barefooted, in the snow, and to rub themselves vigorously

all over with it, while ice-cold water is administered judiciously as a medicine with each meal. They wear cotton garments as coarse as sacks next the skin, and have to eat foods which abound with nitrogenous proteids, such as meat, cheese, milk, fish, peas, beans, and lentils.

" Time was when reigned a certain King, whose fame
For playful wisdom has outlived his name ;
A King, who, ruling seldom with the rod,
Guided his people gladsomely to God.

Close upon Candlemas, one happy Spring,
When Court and subjects gathered round the King,
He proclamation made, by royal command,
Which stirred an impulse throughout all the land :

' Know by these presents '—spake the sovereign will—
' Whoso, by Christmas-tide shall best fulfil
Our goodly purpose, he shall guerdon bear
Of golden treasure, and our favour share.

' Whoso with most success shall kindly rear
What brightest is, and best within the year,
What we may judge the purest, whitest thing,
He shall be named the victor by the King.'

Such was the edict : and ambition then
Began to occupy the minds of men,
Each striving, in his rank, by healthful ways,
To cherish what might win him highest praise.

So the realm prospered,—homestead, field, and fold—
As months passed on, through hope of promised gold
For him who finally the prize should bring
Of truest spotlessness to please the King.

Then Christmas came, whilst yet the land was green,
And lingering tints of verdure still were seen,
A bracing spell of sun, and sparkling rime,
Ere bleakest winter had its hardest time.

And now, at noon, on the great Noel day,
The choicest claimants from the large array
Of all who thronged to seek the King's award
Stood proudly eager in the Palace yard :

A simple workman, who, with loving pains,
Had lavished on a flower his little gains
Week after week, now laid a lily sweet,
With pearly petals, at his monarch's feet :

A gentle youth, whose soul was set above
Mere earthly scholarship, had fed a dove,
Which, stainless and unsullied from the nest,
He reverent placed within the monarch's breast.

A sturdy yeoman, big with fond desire
To serve his lord, had fostered in the byre
A milk-white heifer, which, superbly grown,
He led with triumph to the monarch's throne :

A stately squire, with his well-favoured dame,
To bring their modest, meek-eyed daughter came ;
Than whom no maid of summers seventeen
More fair, and faultless waited on the Queen.

Of heifer, dove, sweet flower, and maiden fair,
In pure white contrast to the trim parterre
Of the quadrangle, as the sunbeams fell,
Which seemed most spotless it were hard to tell ;

Therefore, the King, who held a wise intent,
His gaze on each in turn uncertain bent,
Then bade them all another week to bide,
Till New Year's Day the contest should decide.

But, as the week pursued its onward course,
Keen winds brought snow, in fast and constant force,
So that the kingdom with a mantle white,
And dazzling, was on New Year's morning dight.

And when again the candidates were ranged
Around the King, each bore an aspect changed
From former excellence : the lily's hue
Was to its pristine splendour scarcely true ;

The dove's soft plumage, which so chaste had shown,
Betrayed a look as if less lustrous grown ;
Whilst from the snow the fierce reflected gleam
Made the white heifer saffron-tainted seem :

Even the clear translucency of face
Which lately lent the maiden classic grace,
Disclosed some subtle blemishes to sight
When tried by such severity of light.

Then did the monarch hasten to avow
His sage decision, hidden until now,
Which, by his heralds, with a trumpet's blast,
He thus delivered to the concourse vast.

'The lily bearer—this is our decree—
Shall by the State henceforth supported be :
And for the gentle scholar, with his dove,
A yearly pension we hereby approve ;

'The trusty yeoman, with his heart so warm,
Shall be our Bailiff on the Palace-farm ;
And the sweet maiden, by her parents' will,
A post of honour to the Queen shall fill.

'But we bid each take notice,—with the rest
Of all our faithful subjects,—that the best,
And brightest things our kingdom could supply
Failed when God's snow came down with them to vie:

'So let our land the golden lesson learn
That for our purest pleasures we must turn
To heavenly sources: where, we humbly know
Our 'sins of scarlet are made white as snow.'"

INSECTS.

SEVERAL Insects which are edible (themselves, or their products), whilst exercising certain curative virtues, may be briefly considered here. A more detailed attention has been already devoted to them in *Animal Simples*. "These ye may eat," said Moses the wise lawgiver to the Israelites of old, "the locust after his kind, and the bald locust after his kind, and the beetle after his kind, and the grasshopper after his kind."

The common Honey Bee, besides affording the *mel* which confers its name (*Apis mellifica*), supplies, by its sting-venom, in the Hum, or bee-beer of cottagers, a medicament of potential excellence (*see* HONEY). Likewise our well-known Wasp (*Vespa*) can furnish, as Vincent Holt graphically tells, an equally delicious savoury to that of the Honey bee; "the saccharine fluid with which wasps feed their infant grubs is entirely composed of vegetable juices drawn from ripe fruits, and flowers. Let us then welcome among our choice dishes wasp grubs baked in the comb."

Caterpillars," says M. Dagin, a French entomologist, who has recently been making exhaustive experiments with regard to esculent insects, "having personally eaten some hundreds of species, raw, broiled, boiled, fried, roasted, and hashed, I find most of these pleasant to taste, light, and digestible." From some he has concocted

"A capital stew, with spices and sherry,—
Like the Boniface Mayor of St. Edmonsbury."
in Praed's Poem.

But the despised Cockroach, or Black Beetle, of our kitchens is what M. Dagin waxes most enthusiastic over. "Pounded in a mortar, put through a sieve, and poured into beef stock, these creatures make a soup preferable to bisque." Nevertheless, a Chinese proverb runs to the effect, "If your stomach is delicate,

abstain from the Cockroach." And after all there is not any more valid reason to urge against eating cockroaches than against taking shrimps with tea, after the popular practice of Margate. These latter, if fried in their shells, just as they leave the sea, have proved delicious, like white-bait, and richer, whilst the shells do not become hardened as by boiling. For curative purposes the Cockroach has long been employed against dropsy by Russian doctors, likewise for Bright's disease of the kidneys; and one of our leading chemists now prepares powdered Cockroaches for similar therapeutic uses in this country. The insect is nocturnal in its habits, and gives off a disagreeable, fetid odour through a fluid poured out from its mouth.

Another class of insects, the Spiders, though never taken as food in any form, exercise healing virtues against ague, whilst the applied web avails to arrest bleedings; these are established facts. Messrs Kirby & Spence do not hesitate to declare that if one could rise above prejudices, he would probably find some spiders a delicious morsel as dainty food. The celebrated Anna Maria Schurman used to eat spiders like nuts, which, as she affirmed, they much resemble in taste. Rosel also speaks of a German who was in the habit of spreading spiders like butter on his bread. But such practices are open to question as regards their wholesomeness, seeing that spiders are carnivorous feeders.

As the basis of all their bodily structures, spiral tubes, intestines, skeleton, hairs, and external scales, insects are endowed with *chitin* (which forms also the bodily framework, and skeleton of crabs, lobsters, and shrimps, with other crustaceæ). It was this animal substance in locusts which, with wild honey, constituted the food of John the Baptist. But such chitin is more difficult of digestion than the corresponding gelatin of beef, mutton, fish, and poultry; so that the nightmare which proverbially follows a lobster supper in close attendance thereon, is probably attributable to this difficulty of chitin solution in the stomach. In *Othello*, Act 1, Sc. 3, we read "The food that to him is now as luscious as locusts, shall be to him shortly as bitter as Coloquintida," (Iago to Roderigo). And here probably the food of the Locust-tree was referred to, of which the seed-pod contains a rich luscious juice closely resembling fresh honey. So, with respect to the Locusts upon which John the Baptist supported himself in the wilderness, certain critics have

chosen to believe they were of vegetable nature, as cassia pods. But this is not so. Almost every traveller of note has told how the Locust insects are enjoyed as food in the East. Pliny records this fact, and Herodotus describes the mode adopted of powdering Locusts for baking them into cakes. Sometimes they are merely fried, their legs and wings plucked off, and the bodies eaten, flavoured with pepper and salt; other persons powder and bake them; or again, they are boiled, turning red after the fashion of lobsters, during the process. In India, like every other article of food, they are curried. At Tonquin these insects are sold in the market as a great delicacy. Mattieu Williams advises that the introduction of Locusts fried, and tinned, as an epicurean delicacy, would be a boon to suffering humanity, by supplying industrial employment to the inhabitants of districts subject to periodical invasions by swarms of locusts, amounting to a plague by their devastations. The notion of eating them appears repulsive at first, but chitin is chitin, whether elaborated on land, or secreted in the sea. The vegetarian Locust, and the cicada (grasshopper) are free from the pungent essential oils of the really unpleasant cockchafer. Though, concerning this latter insect, *Melolontha vulgaris*, (the fat chafer) as food, Vincent Holt quotes the jaunty rooks as excellent judges. Lalande, the French astronomer, found that caterpillars tasted of almonds, and that spiders had a nutty flavour. By the Congress of Entomologists held at Paris, in 1887, it was solemnly proclaimed that cockchafers, at least when young, are a "perfect food," if their preparation be rightly understood. The recipe which was then drawn up for "Cockchafer Soup" ran as follows:—"Take a sufficient number of cockchafers, pound them in a mortar, then strain them through a sieve. For a light clear soup use water; for a thick ditto add fat. In both cases the result is delicious, and calculated to please the most fastidious of gourmets."

Anyhow, be their culinary and curative uses what they may, we all owe much of our outward welfare to the insect world; and it were well for us if we might minister to the happiness of our neighbours at large as abundantly as insects subserve our enjoyment of nature around us. The insect is the prince of gardeners. His buttercup, his dandelion, and his meadowsweet grow thick in every English field; his thyme clothes the hillside; his heather purples the bleak, grey moorland; high up among

the Alpine heights his gentian spreads its lakes of blue; amid the snows of the Himalayas his rhododendrons gleam with crimson light. The Insect has thus turned the whole surface of the Earth into a boundless flower garden. Not but that certain animosities arise between plants, and their fertilizing visitors, of the obnoxious insect sort. "Our gearden," says the peasant of Devonian speech, "be awver rinned wi' veathervaw (feather-few), but I dawn't mind much, vur tez cabbical stuff tü rub intü tha chillern's necks night times tü keep away tha vleys." The white ant is eaten with avidity by the natives of Hindustan, and the giant red ant is as eagerly devoured by the people of Guiana and Brazil. The flavour of these ants is saccharine, and slightly acidulous. "Go to the ant, thou sluggard; consider her ways, and be wise."

But with respect to the common ant as an example of vigilant foresight, and provident care, giving timely precepts to the sluggard, this insect actually lays up no store at all of food for the winter, though so often quoted as a model of industrious economy. It is not only one of the sleepiest creatures (in cold weather), but even furnishes formic acid, as a constituent basis of chloroform, which serves to steep the senses in forgetfulness. The ancient Greeks were acquainted with the drowsy properties of ants, and they availed themselves thereof as hypnotics.

JAMS AND JELLIES (*See* FRUIT).

NOT without sentimental uses are jams and jellies. When Mr. Weller, senior (in *Pickwick*) became a widower, at the snug *Marquis of Granby*, Dorking, which was his private property, "Sammy, my boy!" said he to his sympathising son, "the breath was scarcely out of your poor mother-in-law's body ven vun old 'ooman sends me a pot of jam, and another a pot o' jelly, and another brews a blessed large jug o' camomile tea, vich she brings in vith her own hands." Jelly in Scotland goes by the name of Frummelin Tam.

JUNIPER BERRIES (*See* GIN).

KIDNEYS.

"As food," writes Dr. Yeo, "animal kidneys are of close, firm texture, and when much cooked become very hard, and

difficult of digestion." Sheep's kidneys contain about seventeen per cent of albuminates, and two per cent of fat. They may be grilled, fried plain, or egg-and-bread-crumbed beforehand. Ox kidney, even when thoroughly cooked, requires a good mastication, and a strong digestion, having moreover a strong flavour of its own. The calf's kidneys may be minced, and braised, going well with a brown sauce. Dr. Haig attributes to the sheep's kidney as food three and a quarter per cent of uric acid. Some of the earliest mediciners, with an empirical instinct gave donkey's kidneys for curing diseases of the same organs in their human patients; and recent medical science justifies such a proceeding, according to the expounded principles of curative animal extracts. Lately, in thirty-five sick persons labouring under various diseased states of the kidneys, an internal administration of fresh, healthy animal kidney in small quantities, or of an extract prepared carefully therefrom, has proved of undoubted curative value, as faithfully recorded by attendant physicians. Urea, and uric acid as eliminated by the kidneys, are now proved by many facts to serve protective purposes within the human system. These are chiefly products from animal foods, and are antagonistic to the tubercular disposition towards consumptive disease of the lungs. But they are favourable to the development of gout, the said two diseases being opposed to each other; for the former, it is proper to give a liberal allowance of nitrogenous proteids, sweets, fats, butter, beer, and the like; but for the latter just the reverse, only a little meat, and that principally of the white sort, plain fish, fruits, vegetables, and milk foods. It is a known fact that vegetarians, and sedentary persons whose tissues are always laden with carbonates, are examples of the structures which most readily foster consumptive germs, and that these persons become materially benefited by increasing their nitrogenous nourishment. Furthermore, in gouty conditions it is desirable to augment the combustion of the *materies morbi* by active exercise, as Abernethy taught in a practical manner when he made his gouty patients dance on hot plates.

Whereas it has been until within the last few years supposed that the sole function of our kidneys is to excrete urine from the system, doctors now understand that these organs perform another important duty of pouring from themselves important matters into the blood, lacking which the general body has its

welfare seriously impaired; and the vital fact has been learnt that if healthy animal kidney substance be given under these conditions, then the disturbed balance of soundness is restored to the patient. Therefore, for meeting this object our manufacturing chemists supply animal kidney substance ready to hand as a dry powder, or in tabloid form. But still better is the fresh healthy animal kidney as furnished opportunely by the cook.

A liking for sheep's kidneys is not confined to the human gourmet. For instance, we are told by Dr. John Brown, of Edinburgh (1860), in *Our Dogs*, that "Jock, of the Orkneys, though beloved by his master, took to evil courses, extracting the kidneys from the best young rams of the flock, and driving whole hirsels down steep places into the sea, till at last all the guns of Westray were pointed at him, and blew him into space as he stood at bay under a huge rock on the shore." Curiously enough, the term kidney was at one time a cant word for a servant in waiting. Thus *The Tatler* has told, "it is our custom upon the first coming of the news to order a youth who officiates as the kidney of the coffee house to get into the pulpit, and read every paper with a loud and distinct voice."

KOUMISS, (*and See* MILK).

THE *Kumys* of the Kergese, who inhabit the Asiatic steppes—a fermented drink made from mare's milk,—was described by the father of history, Herodotus, and remains a typical Kergese product to this day. When the milk was drawn, it was poured into deep wooden vessels, and continually agitated for long hours by slaves whom the Scythians kept blind for this purpose. The upper part of the milk then became alcoholic in its solution, whilst the lower part remained as curdled casein, being more of a nutriment than an intoxicant. Mares' milk is not suitable for making butter, first, because it contains but little fat, and next because what fat can be got from it is not butter, but a half oily, lard-like substance of disagreeable taste. Even in the present day the nomads of the Russian steppes do not manufacture any butter, but they prepare large quantities of Kumys. From the above account it may be readily gathered that the artificial Koumiss of our modern dairies differs essentially from the true Koumiss of the Asiatic Kergese.

LARK (*See* BIRDS, *and* CHEESE).

LAVER (*See* SEAWEEDS).

LEEK (*See* ONION).

LEMON.

THE special dietetic value of Lemons (*Citrus limonum*) consists in their potash salts, citrate, malate, and tartrate, which are severally antiscorbutic, and of service in promoting biliary digestion. Each fluid ounce of the fresh juice contains about forty-four grains of citric acid, with gum, sugar, and a residuum which yields when incinerated, potash, lime, and phosphoric acid. The exterior rind furnishes a grateful aromatic bitter, with an essential volatile fragrant oil. Lemon juice exercises certain sedative effects, whereby it can allay nervous palpitation of the heart, and can alleviate the pain of cancerous ulceration when invading the tongue. Dr. Brandini, of Florence, discovered this remarkable anodyne property of fresh lemon juice in cancer of the tongue, by the case of a patient who when suffering grievously from that dire affection found marvellous relief to the part by casually sucking a lemon to slake his feverish thirst. As a substitute for the lemon juice, citric acid may be employed, dissolved in cold water, one drachm to eight fluid ounces of water, to be applied with a camel-hair brush; likewise, at other times, pledgets of lint saturated with the juice, or lotion. For a cold in the head, if the juice of a ripe lemon be squeezed into the palm of the hand, and strongly sniffed into the nostrils two or three separate times, a cure will generally be set going.

> "Into an oval form the citrons rolled
> Beneath thick coats their juicy pulp unfold;
> From these the palate feels a pungent smart,
> Which, though they sting the tongue, yet heal the heart."

Cole's *Adam in Eden* says the fruit of the pome-citron tree being like to the heart in form, is a very sovereign cordial for the same.

It is remarkable that the acid of lemons, whilst harmful to rabbits, cats, and other small animals, by lowering the heart's action, and liquefying the blood, does not diminish the blood's coagulability in man, but will specially correct the thin impoverished liquidity of that circulating fluid which constitutes scurvy. Throughout Italy, a decoction of fresh Lemons is extolled as a specific against intermittent fever. Also Lemon-juice is decidedly

beneficial against jaundice from torpidity of the biliary functions. Lemons furnish, as aforesaid, combinations of potash with organic acids—the citrate, malate, and tartrate—which soon undergo combustion in the body, and set free their alkaline base. Thus these salts tend to promote biliary digestion. Again, the fresh juice will serve to stay bleedings, when ice and astringent styptics shall have failed; and, if applied externally, it will promptly relieve any itching of the skin without soreness.

For heartburn which comes on from other causes than acid fermentation of greasy rich, sweet foods, it is most helpful to suck a thin slice of fresh lemon dipped in table salt. The lemon juice does not remain acid in the stomach, but presently becomes an alkaline base, which neutralizes the gastric excess of acids. The first effect is refreshing, and next it proves sedative. The dietetic use of lemon-juice diluted freely with water will obviate a liability to gall stones, as frequent experimental use thereof has shown. The pips of a fresh lemon, or orange, if bruised together with a sufficient quantity of sugar, will serve to extirpate worms from the intestines of children. The Chinese method of rubbing parts severely neuralgic with the wet surface of half a cut lemon is highly useful. Fresh lemon-juice when squeezed out from the fruit, will not keep because of its mucilage, which soon ferments. It can be preserved by bringing it to the boiling point, and then sealing closely in bottles to protect it from the access of air, these bottles being made boiling hot at the time.

A German professor has shown that lemon-juice has a special faculty for destroying the bacillus of diphtheria. He has tried this successfully in fifteen acute cases, only one of which died; likewise in eighty other cases of severe sore throat. The diluted juice was used as a gargle, and slices of lemon were sucked frequently, whilst rejecting the pulp. For a restless person of active plethoric circulation, and of ardent temperament, a Lemon Squash, unsweetened, of not more than half a tumblerful, is an excellent quieting drink at, or towards bedtime; or a whole lemon may be made hot on the oven top, being turned from time to time, and being put presently when soft, and moist, into a teacup; then by stabbing it about with the blade of a pen knife the juice will be let escape, and should be drunk with a little hot water, not sweetened. Fresh lemon-juice, diluted so as to avoid any smarting effect, is a capital cleanser of the skin. Eugene Aram, the Knaresborough schoolmaster, on the eve of

his execution at York Castle, 1759, for the murder of Daniel Clarke, (a shoemaker,) committed thirteen years before, at his last interview with Sally, his favourite daughter, bade her make a wash of fresh lemon-juice for her freckles. Sydney Smith, in writing about Foston, his remote country cure, in Yorkshire, said, "it stands twelve miles from a lemon." He kept a village medicine chest which contained "heart's delight," the comfort of his old women; also "the gentle jog;" the "bull-dog" for more serious cases; "Peterspuke, and up with it;" "Rub-a-dub," the best of embrocations; and "dead stop, which settles the matter at once." The juice of a lemon mixed with honey, in a breakfastcupful of hot water, is quite a specific for sore throat which is catarrhal, also for the teasing cough which troubles some persons in damp weather.

In rheumatic fever, when the system is saturated with mischievous, sour, fermentative products, fresh lemon-juice, mixed in equal proportions with boiling water, and allowed to become cool, is an excellent antidote, to be taken pretty often. The citric acid of the lemons being combined with potash, becomes burnt off quickly in the body, leaving its alkaline base to neutralize the rheumatic acids, and thus subduing the disease. As a *nutritive* lemonade, combined with white of egg, take two lemons, using their yellow rinds for flavouring, whilst rejecting the inner white rinds. Slice the lemon, and pour over them, together with the outer yellow rinds, a pint of boiling water; stir until cooled to the temperature of ordinary tea, and then strain. The whites of two eggs are next to be slowly added, whilst briskly stirring the liquid. Whip the mixture for several minutes, and then strain; add sugar to taste, and drink the lemonade cold. The pips should always be first taken out.

During intermittent fevers, fresh lemon-juice is helpful and refreshing, being mixed with strong, hot, black tea, or coffee, without sugar. Throughout Italy, and at Rome, a decoction of fresh lemons is extolled as a specific antidote to such intermittent fevers; for which purpose a fresh, unpeeled lemon is cut into thin slices, and put in an earthenware jar with three breakfast-cupfuls of cold water, and boiled down to one cupful; this is to be strained, the lemon being squeezed, and the decoction is to be given shortly before the access of fever is periodically expected. The lemon juice has quinine-like properties in bringing down the temperature of a fever-stricken patient.

For making lemonade to assuage the thirst in feverish states, it would be a mistake to pour boiling water upon sliced lemons, because then the peel would become also infused, and it would act medicinally. Fresh lemon-juice should be squeezed into cold water, that of three lemons to a quart of water, which has been first boiled, and then allowed to become cold ; a few crushed strawberries (if in season) may be added, and the cut-up rind of one lemon. "But" says ma brither Peter to Mrs. McLeerie, in *Wee Macgregor* : "Lemonade's mair puff than pleasure." A capital lemonade has been formulated by Dr. Leftwich, which is nutritious, and eminently palatable, especially for children in feverish disorders, being more supporting than beef tea. Two lemons are peeled twice, the inner white peel being rejected, and the outer yellow peel, with the sliced fruit, placed in a quart jug with, say, two lumps of sugar. Pour boiling water on them, and stir occasionally. When cooled to the temperature of ordinary tea, insert an egg whisk, and slowly add the whites of two newlaid eggs. Continue whisking for two or three minutes, and strain, whilst still hot, through muslin ; serve when cold. For patients who are not feverish, two eggs may be used for each pint of the liquid, and thus it will be made more nutritious. Children, who often show an aversion to beef-tea, readily take this lemonade.

The lemon treatment for making the blood alkaline against gouty acids in the system, is now gaining well-merited favour, unless carried to excess. A leading medical journal has lately advocated taking the juice of from four to fourteen lemons daily, which latter would undoubtedly be injurious. It is said that working girls often do themselves no little harm by sucking lemons to give a white complexion. For making Lemon Marmalade, of a delicious sort, slice very finely twelve nice lemons, scoop all out, and cover the pulp with three pints of clear cold water ; boil the skins well for two hours before adding them to the pulp ; leave the skins in the water after boiling overnight, then weigh the skins and pulp together ; strain off the water in which the skins have been boiled, and to a pound of fruit with water add a pound and a quarter of loaf sugar ; strain off all pips, and boil for one and a half hours until perfectly clear. Turn into glass jars, and tie down when cold. The juice of one lemon squeezed into a tumblerful of very hot water, and drunk on getting into bed, will usually throw a patient with

catarrh into a profuse perspiration, and he wakes almost well the next morning. For Lemon Whey: boil a pint of milk with a teaspoonful or two of fresh lemon-juice, and then strain through muslin, squeezing all the liquid from the curd. If this curd be well broken up after coagulation, and all the liquid be thoroughly drained out, much of the fat, and some of the divided casein of the milk will pass into the whey, and will thereby much increase its nutritive properties.

As a safeguard against accidental diarrhœa when travelling in hot countries, an efficient means may be found in fresh lemon juice. The patient should lie down, and keep sipping a mixture of half lemon-juice, and half water (first boiled, and cooled), or simply sucking lemons until the symptoms have ceased; there is no risk of taking the juice to excess. An excellent "cocktail" to be given when tired, and thirsty, may be made with one fresh egg, one tablespoonful of pounded sugar, four or five squeezes of fresh lemon-juice, and four or five small lumps of ice. Fill up with cold water. Mash well, and strain into a large glass, grating a little nutmeg on top. For Lemon Pie (a southern recipe): take the yolk of four eggs, beaten to a cream, with a cupful of granulated sugar, and the grated rind of a lemon. Peel the lemon, removing every particle of white rind, and cut it into thin slices. Have a pie plate lined with puff paste, arrange the slices of lemon thereupon. Add enough milk to the eggs, and sugar to fill up the plate, pour this in, and bake until set. Beat the whites of the eggs to a stiff froth, and stir in two large heaped tablespoonfuls of sugar, putting the same on top of the pie; then bake a light brown. Charles Dickens, in a letter to Mark Lemon, when the latter was editor of *Punch*, and overwrought with the literary strain, thus admonished him:—

"O my Lemon, round and fat!
O my bright, and right, and tight 'un!
Think a little what you're at:
Leave your work, and come to Brighton."

Lemons grow in special abundance at Mentoni; and a legend obtains there that Eve, when banished from the garden of Eden, carried away with her two or three Lemons, and wandered about with them until she came to Mentoni, which seemed so like Paradise that she settled there, and planted her fruit.

LENTIL (*See* BEAN).

LETTUCE.

OUR garden Lettuce is a cultivated variety of the wild, or strongly scented Lettuce (*Lactuca virosa*) which grows with prickly leaves on banks and waysides in chalky districts throughout England and Wales. This wild Lettuce contains the medicinal properties of the plant more actively than does the garden Lettuce, as grown for kitchen uses. Chemically, the cultivated Lettuce which comes to our tables contains in quite a modified degree principles which in the wild plant are narcotic, and dangerous. But these principles, *lactucin*, *lactucopicrin*, and *asparagin*, with oxalic, malic and citric acids, mannite, albumin, gum, and resin, have become as completely toned down, and rendered harmless, as were the child-like manners, and the pensive smile of Bret Harte's Heathen Chinee. The Lettuce, or milk plant, was esteemed by the early Romans as a sedative for inducing sleep, and to be eaten after a debauch of wine. They prepared this vegetable with eggs, and served it with the last course at their meals, so as to stimulate the appetite afresh. With ourselves, the Roman, or Cabbage Lettuce, is the best to "boil, stew, or put into hodge-podge"; then come different sorts of the Cos Lettuce to be eaten raw. When tied up compactly, and thus bleached as to its inner leaves, the lettuce remains tender, crisp, and succulent, being easily digested, even by dyspeptic persons, except as regards the hard stalk. The lettuce contains but little nutriment, though supplying some mineral salts, particularly nitre. In the stem there still lingers a small amount of the sleep-inducing principle, *lactucerin*, especially when the plant is flowering. The Cabbage Lettuce, *lactuca sativa vericeps*, is slightly bitter, because of its milky juice containing the soothing principle *lactucin*. Galen termed the plant "philosopher's, or wise man's herb." Its condensed juice is named *thridax* in France, and *lactucarium* in England, when drying into a kind of gum, brown like the opium-gum of Poppies, but much milder of effects. Two grains of this lactucarium from the garden lettuce may be safely given to a young child for soothing it to sleep. Mr. Roker, the rough turnkey of the Fleet Prison in which Mr. Pickwick chose to be incarcerated for debt, on being asked to point out which was the bedstead allotted to that gentleman, denoted a very rusty one in the corner of the room. "It would make one go to

sleep, that bedstead would," said Roker, "whether they wanted to, or not." "I should think," said Sam Weller, (Mr. Pickwick's manservant), eying the piece of furniture in question, with a look of excessive disgust, "I should think poppies was nothing to it."

With regard to peace of mind as essential towards good sleep, "beware," says Dr. Kennedy, "of the theologians who have no sense of mirth; they are not altogether human. Keep your chin up, don't take your troubles to bed with you, hang them on a chair with your trowsers, or drop them into a glass with your teeth." Pope has sung concerning our garden lettuce:

> "If you need rest,
> Lettuce, and cowslip wine,—probatum est."

But if the lettuce is taken at supper with the view of promoting sleep, it should be had without any vinegar, which would neutralize its soporific effects. In his *Book of Sallets* John Evelyn writes enthusiastically about the Lettuce, "So harmless is it that it may be safely eaten raw; in fevers it allays heat, bridles choler, extinguishes thirst, excites appetite, kindly nourishes, and, above all, represses vapours, conciliates sleep, and mitigates pain, besides the effect it has upon the morals, temperance and charity." "By reason," concludes Evelyn, "of its soporiferous quality, the Lettuce ever was, and still continues to be the principal foundation of the universal tribe of sallets, because it cools and refreshes, besides its other properties, and therefore was held in such high esteem by the ancients that divers of the Valerian family dignified and ennobled their name with that of *Lactucinii*. It is botanically distinguished as the *Lactuca sativa*, from the plenty of milk that it hath, and causeth."

> "Lettuce of lac derivyed is perchaunce,
> For mylk it hath, or yeveth abundaunce."

"With the old Romans" (vegetable feeders) adds Evelyn, "time was before men, in those golden days" (and less sleep was needed than now), "their spirits were brisk, and lively":

> "Ubi dicto citius curata sopori
> Membra dedit; vegetus præscripta ad munera surgit."

> "With shorter, but much sweeter sleep content
> Vigorous, and fresh about their business went."

"They could then make an honest meal, and dine upon a sallet, without so much as a grain of exotic spice."

> "See now how pale they look, how wretchedly
> With yesterday's surcharge disturbed they be;
> Nor body only suff'ring, but the mind,
> That nobler part,—dull, and depress'd we find."

Lettuce, after wine, says Horace, swims in the soured stomach :

> "Nam lactuca innatat acri
> Post vinum stomacho."

That excellent Emperor, Tacitus, used to say of Lettuce that he did "*summum se mercari*," when he ate of them, and call'd it a sumptuous feast, with a sallet, and a single pullet; which was usually all the flesh-meat that sober prince ate of; whilst Maximinus (a professed enemy to salad), is reported to have "scarce been satisfy'd with sixty pounds of flesh, and drink proportionable." Boiled Lettuce (in its own water only) has a very delicate flavour, being considered by some persons superior even to asparagus. Take a large, well-grown Lettuce, and wash it thoroughly in strong salt and water to remove insects, then rinse it well out in fresh water, and gently stew it for ten or fifteen minutes. Serve on buttered toast, with a light sprinkling of pepper and salt. Sorrel soup (*bonne femme*) is to be made also with Lettuces. Leaves of Cabbage Lettuces are bruised with the sorrel in butter, treated with bouillon, and a liaison of egg-yolk, butter, sugar, and browned gelatinous gravy. The sorrel and lettuce must be present in about equal quantities; less than this of sorrel would be useless.

LINSEED.

A DEMULCENT drink made from Linseed, the seeds of flax, is most helpful against catarrhal soreness of the chest, with irritating hard cough. These seeds are very rich in oil, containing nearly four ounces in every pound of the seed, together with gum, acetic acid, acetate of potash, and muriate of potash. A Linseed tea may be concocted from the ground seed with cold water, one ounce to the tumblerful, steeped all night, and then poured off (after being stirred) in the morning, and presently allowed to settle. This cold tea is sustaining for consumptive

patients. If Linseed is ground into meal, and macerated in boiling water, the abundant mucilage to be obtained from the outer skins makes a poultice as prepared therefrom, emollient, and soothing when applied very hot. The Linseed oil has laxative properties as a medicine; furthermore, when mixed with lime water, it makes an admirably protective covering for recent burns, and scalds. A more elaborate Linseed tea may be thus concocted: Wash two ounces of linseed, putting it into a small strainer, and pouring cold water through it, then pare off as thinly as possible the yellow rind of half a lemon; to the linseed and lemon rind add a quart of cold water, and allow them to simmer over the fire for an hour and a half; strain away the seeds, and to each half pint of tea add a teaspoonful of sugar, or sugar candy, with some fresh lemon juice, in the proportion of the juice of one lemon to each pint of the tea. Powdered sugar-candy with white of egg, as an emulsion, is used remedially in Germany. To make sugar-candy thin strings are suspended in a very strong solution of sugar, which is then left standing in a cool place until the candy forms as crystals about the strings (also on the sides of the vessel.)

After the linseed oil has been expressed from the seeds, then their refuse is oil cake, a well known fattening food for cattle. Linseed (*linum usitatissimum*) was taken in cookery by the ancient Greeks and Romans, but it is difficult of digestion, and affords but little proteid nourishment, whilst provoking troublesome flatulence. In the sixteenth century, during a scarcity of wheat, the inhabitants of Middleburgh had recourse to linseed for making cakes, but the death of many citizens was caused thereby, bringing about in those who partook of the cakes dreadful swellings on the body and face. In Dundee, a hank of (flax) yarn is worn round the loins as a cure for lumbago, and girls may be seen with a single thread of this yarn round the head as an infallible specific for tic doloureux. Linseed oil is substituted for lard on fast days by Italian peasants and labourers.

LIQUEURS.

During the middle ages liqueurs were supposed to be medicinal remedies for universal use, but their modern employment is almost wholly for pleasing the palate. As such they follow substantial meals of meat and drink, *pour la bonne bouche*, so

as to leave a pleasant impression on the gustatory nerves; therefore, they should never be of great alcoholic strength, but retaining a superb finesse of flavour, and being sweet enough to please ladies. Furthermore, by reason of the specific herbs, and aromatic essences, which go to flavour the different liqueurs, certain medicinal virtues attach themselves respectively to each of the best products, these liqueurs consisting mainly of spirit sweetened with cane sugar, the proportion of such ground work varying from thirty-three to fifty per cent.

It has been well said that these liqueurs are chiefly produced by the alchemist, and the convent. They are of three distinctive qualities. First come Ratafias, or simple liqueurs, in which the sugar, the alcohol, and the aromatic substances are in small quantities; for example, anise water, noyeau, the apricot, and cherry ratafias. But, through the practice of steeping macaroons of the bitter almond in spirit, and calling the result "ratafia," any liqueur of the bitter almond flavour now bears this designation. The name was got originally from the fact that some such a liqueur used to be drunk at the ratification of compacts, and bargains, as a glass or cordial comfort. At first, the housewife had only to infuse four ounces of sweet almonds, and the same quantity of bitter almonds, in a quart of British gin, together with a pound of loaf sugar. These ingredients were kept in a warm place, being mixed, and stirred frequently for a fortnight, then straining, and filtering into liqueur bottles. Of all the ratafias, Curacoa became *facile princeps*; the novels of eighty years ago were full of allusions thereto. We remember how the feeble Sir Francis Clavering drank this, and cried over it after breakfast, and how it disagreed with Major Pendennis because of the orange peel. Fauntleroy possessed the secret of concocting unequalled Curacoa, and when sentenced to death for forgery, took this secret with him to the scaffold. Curacoa is made in Amsterdam from the rind of bitter oranges which have been grown about the island of Curacoa, in the Dutch West Indies. The orange peel, with a little lemon, is steeped in pure spirit for some weeks, adding cinnamon, coriander seed, saffron, and sugar. Curaçao is the more proper spelling. Fermented cherries yield an excellent distilled spirit, cherry-water, kirschenwasser; if from a cherry called *marasche*, it is *maraschino*. A famous wild cherry-ratafia is still made at Grenoble, and a five-fruited ratafia at Hyères.

The second quality of liqueurs are those having the essential

oils combined with more saccharine and spirituous matters, as anisette, and curaçoa (just mentioned). The third are the creams, or superfine liqueurs, as rosa solis, maraschino, Dantzic water, and others. Rosa solis was at one time much esteemed as a cordial, being made with spirits, and various essences, to wit, orangeflower, and cinnamon, etc. In the *Fortunes of Nigel*, chapter xxi, Sir Walter Scott has told of Dame Ursula "repeating, as the rich cordial trickled forth in a smooth oily stream, 'Right *rosa solis* as ever washed mulligrubs out of a moody brain.'" Originally the Grande Chartreuse was prepared from a secret recipe which has been preserved for more than six hundred years, and was associated with mediæval religion. This elixir has become developed by the Carthusians into three varieties, the green, familiar to diners out, the yellow to doctors, and the white to valetudinarian dyspeptics. Chartreuse possesses the fragrance of garden herbs, the aromas of several spices, flowers, and nuts, together with the balsamic savour of young green tassels from pine trees. When made directly from bitter almonds, or with pounded kernels of apricots, or peaches, or with cherry laurel leaves, the liqueur is called Noyau. Danzig gold and silver wasser was first produced at Danzig, its peculiarity consisting in small particles of gold leaf, or silver leaf, swimming therein, but without imparting any particular flavour thereto. Benedictine is distilled at Fécamp, in Normandy, originally by the Benedictine monks, but now by a secular company. It resembles Chartreuse in flavour, as derived from the oils of angelica, hyssop, nutmeg and peppermint, whilst containing a large proportion of sugar. Vodka is a Russian liqueur, transparent, and colourless as water, but a fiery beverage for all that, prepared from rye, or potatoes. It has been defined as "distilled damnation," and must be taken at a draught, since to sip it is considered a proof of a future sojourn in the place of eternal torment. Maraschino is made by macerating a small sour Italian, or Dalmatian cherry, with the crushed stones thereof, and with ten per cent of honey added, the whole being fermented; it takes months to mature. Kimmel, or Kummel, is brandy flavoured with cumin, caraway, and coriander.

The particular medicinal properties (available for curative uses) of these several liqueurs reside in their flavouring herbs, and essences, with which they are respectively impregnated, and which are told about here under their different headings.

Concerning Chartreuse, Dr. Thudicum has related some interesting particulars. "The religious brotherhood called Chartists, or Carthusians, (one compulsory rule of which order was a total abstinence from flesh) devised an elaborately constructed dish which was named a "Chartreuse," "the queen of modern entrées," quoth Careme. "*La Grande Chartreuse ne doit contenir, comme on soit, que de legumes et des racines.*" Such a Chartreuse (the most accomplished of hot vegetable combinations) could be perfect only in the months between May and August, inasmuch as the vegetables necessary for its production are only then in the desired state of growth and tenderness. Eventually, however, parts of fish and shellfish were allowed to be introduced by Careme, leaving only the casing to consist of the legitimate vegetables and roots. At last, together with the Chartists went the Chartreuse, and its name became misapplied to a simple pudding made incongruously of flesh and vegetables, whilst distinguished by French cooks as *à la Parisienne.* Next the predilections of the Carthusians extended from concretes to abstracts, and from pies they ascended to liqueurs, this advance being effected by a process of evolution which passed through an apple pudding. The Chartreuse of apples began with apple-jam, (called in mistake marmalade by French and German cooks); then Angelica entered as an ornamenting incrustation over the yellow, red, and white apples cemented together by the jam, the whole being boiled in a water-bath, and turned out on a plate. Here ended the apple Chartreuse, the apples assuming therein their ancient rights, and shapes. But the Angelica wandered to the brandy bottle, and Chartreuse developed into a spirit, the Carthusians becoming at length manufacturers of liqueurs. "*Sic transit gloria Carthusianorum.*" Modern Chartreuse is now compounded at Tarragona, in Spain, having among its herbal ingredients (mostly secret) carnations, and the young buds of pine. Orange liqueur is made, according to an old Dutch recipe, by peeling very thinly ten oranges and ten lemons; then putting the peel into four bottles (in quantity) of good Cape brandy, adding four pounds of white sugar. Let it stand thus for eight, or ten days, stirring each day morning and evening; strain, and bottle.

Concerning Wormwood liqueur, *see* ABSINTHE.

Angostura cordial is chiefly flavoured with bark bearing that

name, from the Angostura, or *Cusparia febrifuga*, other spices being added. This bark has a tonic operation without astringency, being of particular service in the typhoid state of fevers, and especially in tropical dysentery. It contains a volatile oil, resins, gum, salts, and cusparin, tannin not being present. The tree is found abundantly on the mountains near the Orinoko river. Angostura liqueur is now manufactured at Trinidad.

The Table, an excellent culinary magazine, is astonished as to how the use of liqueurs has lately grown in this country. "Time was when they were used only by a few; but now every suburban householder offers them after dinner; and at every luncheon and supper party the liqueurs make their appearance as a matter of course. Even ladies when lunching, or dining alone, regard their coffee and *petit verre* as quite a necessity. Nor is it the sweet variety only which they patronize; indeed, absinthe, and cognac are as much used as the sweet liqueurs. Benedictine, however, seems to be first favourite; also Chartreuse, and Kümmel, are very popular, but there appears to be a general belief that the former of these two is on the decrease. Noyau is quite out of the running, though this was formerly by pre-eminence the ladies' liqueur; but Curaçoa, and *crème de menthe* have wholly taken its place, with them at least."

The Ratafias are liqueurs which have not been distilled, since, for obtaining the perfume, aroma, and colour of a fruit, its expressed juice may be best put into brandy, so as to fabricate the different ratafias; and because the majority of these juices are full of water strong, brandy must be used. For a qualmish stomach disposed to nausea, and sickness, a ratafia pudding is usefully remedial. Butter a pie dish, and cover its bottom inside with ratafia biscuits in a single layer; proceed in the same way with the sides of the dish, then over all strew some sponge-cake crumbs thickly. Beat an egg, mix it with two ounces of cake crumbs, and about an ounce of crushed ratafias; make a pint of blanc-mange (using Bird's powder, of noyau flavour); while it is hot beat it with the egg, presently pour into the dish, and after it has stood for a short time, bake it in a steady oven. When the pudding is turned out, garnish it on the top with small lumps of brightly coloured jelly, either raspberry, or red currant. If wishing to use a shallow dish, then reduce the quantities of cake crumbs, and of ratafias mixed in the blanc mange, to one fourth. Cook only long enough to set, and lightly brown the pudding.

For Grenoble ratafia, "Take three pounds of Morella cherries, and crush them without removing the stones, adding the thinly cut rind of half a lemon, and allow them to steep for a month in two quarts of strong brandy. This may be flavoured at will with cinnamon and cloves. Pass through the sieve, press out the pulp, and filter through paper."

"A captain bold at Halifax, who dwelt in country quarters,
Deceived a maid, who hanged herself one morning in her garters;
His wicked conscience smited him, he lost his stomach daily,
Then took to drinking Ratafie, and thought upon Miss Bailey."

Similarly a Muscat ratafia can be made from stoned Muscat grapes, crushed, and soaked in strong brandy for eight days; then put through a sieve without pressure, and filter, and add sugar to this ratafia.

LIVER.

THE advanced scientific treatment of disordered, and diseased liver in the human subject, by administering fresh animal extracts procured from the prepared healthy livers of sheep, the ox, and other such animals, is discussed elsewhere under their several headings. *Pâté de foie gras*, compounded for nutritive purposes from the livers of specially fattened geese, is a case in point, as it has been described with reference to those domestic birds. It was Sydney Smith who gave us his notion of heaven, as: "eating foie gras to the sound of trumpets."

"The liver of the Hare," told Cogan, in his *Haven of Health* (1589), "when dryed, and made in powder, is good for those that be liver-sick." Again, the liver of an edible Tortoise, or Turtle, is a special delicacy (the taste for it being an acquired one), when eaten with lemon, pepper, and salt, after the gall bag has been first removed. This delicacy is much appreciated by many invalids when they cannot take other kinds of food, and it serves to assist biliary digestion.

Animal liver, and kidneys, resemble one another in being structurally compact solid organs, which contain but little connective tissue. This physical property renders them somewhat difficult to be digested unless they have been minced before cooking, or are thoroughly masticated when eaten. Chemically they both consist chiefly of proteid, together with a small amount of fat; but this proteid is quite different from that of ordinary

meat, consisting as it does to a large extent of nucleo-proteid, which yields nuclein during digestion. Now it has been recently proved that nuclein is an important source of uric acid; and therefore it must be the more prudent course for persons goutily disposed to avoid the dietetic use of these articles of food. Moreover, "sheep's liver furnishes over 6 per cent of xanthic acid, a uric, or gouty element;" thus teaches Dr. Haig. As long ago as 1710, in *Solomon*, Matthew Prior bade his readers "try if life be worth the liver's care"; and *Mr. Punch* has more lately borrowed the play of words: "Is life worth living?" he asks, and replies humorously, "that depends on the liver."

The good city of *Liver*pool gets its name not from the bile-making organ, but from the Ibis (*Falcinellus igneus*), a bird which when adult has its plumage mainly liver-coloured, or hepatic. Curative preparations, and methods for making them, from liver of the calf, sheep, and domestic fowl are described at length in *Kitchen Physic*. The help afforded against active bleeding from the lungs in consumptive disease by giving fresh, healthy animal liver daily as a food, in small quantities, three or four ounces, lightly cooked, and because of its ferment as coagulating the blood, has been definitely explained. The same liver dried and powdered, if administered as a medicament, is similarly of efficient service, though in a less degree.

LOBSTER, AND CRAB.

In general physical composition the Lobster (*Homaris vulgaris*), and the sea shore Crab (*Cancer pagurus*), are practically identical, being crustacean, with a skeleton formed mainly of "chitin," a peculiar gelatin sparingly soluble in the stomach. Also in its shell the lobster owns a resinous substance, brownish-green until boiled, and then turning to a bright red. This gives a particular odour and taste to lobster broth. The flesh of a lobster contains much soluble gelatin. Butler in his *Hudibras* makes use of this creature for a simile :—

> "The sun had long since in the lap
> Of Thetis taken out his nap,
> And, like a lobster boiled, the morn
> From black to red began to turn."

Nevertheless when Alice in *Wonderland* stood up before the Gryphon to repeat a nursery rhyme, she told a somewhat different story :

" 'Tis the voice of the lobster, I heard him declare
You have baked me too *brown :* I must sugar my hair !
As a duck with its eyelids, so he with his nose
Trims his belt, and his buttons, and turns out his toes."

The Lobster has two teeth in its mouth, and three more in its stomach, all of a calcareous nature, and formerly made, when powdered, into lozenges for use against acidity. The scarlet coral of a Lobster is its ovary, full of eggs ; in its general composition the flesh is nutritious, though indigestible for gouty persons. Tinned lobster is apt to develop poisonous ptomaines when eaten, and should be avoided almost invariably. Likewise the stomach of a lobster, which contains its teeth, and is known popularly as " the old lady in the arm chair," is an unwholesome part. As said Robert Lovell (1661), the sum of the matter is that " Lobsters are for strong stomachs : they are best in the full of the moon : they give a strong nourishment, and an indifferent stomach."

According to Dr. Hutchison, " three ounces of potted lobster require about two and a half hours for digestion in the stomach." For cooking a lobster the ancient way was to open it lengthways, and fill it with a gravy compounded with coriander seeds, and pepper. It was then put on the gridiron, and slowly cooked, being basted with the same kind of gravy as already used.

A Lobster can run with great speed, and can spring, tail foremost, to a considerable distance, even with the swiftness of a flying bird. One of the large claws is always knobbed, or " numb," and the other is like a saw, for holding and cutting up the lobster's food. Its body consists chiefly of liver, with fat not readily digestible ; the flesh fibres are dense and coarse, becoming softer if eaten with vinegar, which also neutralises such ammoniacal salts as are likely to be present. Lobsters are carnivorous, and predatory. Jules Janin jocularly called the creature a Marine Cardinal, because assuming a red dress when cooked. Pope, in his *Farewell Ode to London,* has told of exchanging

" Luxurious lobster nights
For sober studious days."

Samuel Pepys (1660), May 27th, says in his diary, " Dined in my cabin, where Mr. Drun brought me a lobster, and a bottle of oil instead of vinegar, whereby I spoiled my dinner ; late to a sermon."

Concerning the marine Crab, it was long ago (1656), declared

"excellent against consumption, hecticks, phthisicks, and asthmas; the eyes (calcareous) take away all acidities, breaks the stone, dissolves the tartareous coagulations, and congealed blood." Crabs also were prescribed of old as of value for increasing a flow of maternal breast-milk. It is the black-clawed species which comes to our tables.

Again, the Crayfish, or Crawfish (*Cancer atacus*), affords a very nourishing aliment that hath recovered divers in consumption. The soup concocted therefrom is Bisque, which used to be known in this country as cullis, because it needed a coulis, or veal broth for its completion. Herbs, spices, some white wine, and anchovies are intermixed with the standard broth of the Crayfish. Bisque soup has been long credited with strengthening curative powers, and as a sexual restorative. "*Le bouillon d'ecrevisses fait un bouillon analeptique, anciennement recommandé dans la phthisie pulmonaire, dans la lèpre, et dans les affections du systeme cutané.*" In the sixteenth and seventeenth centuries the Crayfish was much esteemed as an antidote to hydrophobia; the fish was to be collected when the sun was astrologically in a certain house, and was to be cooked whilst alive.

LOZENGES.

ORIGINALLY the Lozenge was a square, flat slab of gravestone, on which "*losange*" or flattery was inscribed; but this grim and deceitful recorder has given place to our modern little oval tablet of hard paste, serving as a vehicle for this or that spice, medicament, fruit, or what not, to be sucked in the mouth, and provoke a flow of saliva. Such saliva is alkaline, and if swallowed repeatedly during the slow mastication of a hard lozenge, it will correct dyspeptic acidity in the stomach. This will specially occur if the lozenges contain some stimulating ingredient, as ginger, cayenne pepper, etc., or if they be made with the herb Pellitory, which is an active excitant of the salivary glands in the mouth. A very sensible relief is thereby afforded when the digestive processes hang fire: and this accounts for the habit which country dames acquire of carrying about with them in their capacious pockets Peppermint drops, or a piece of ginger root, to be put into use for comforting a stomach-ache; thereby "besides the cordial carminative condiment," says Sir W. Roberts, "or essence, the advent of a bland gummy solution,

as in jujubes, and the like, probably acts topically as a soothing application to the irritated mucous lining membrane within the stomach, allaying its morbid sensitiveness, and thus disposing it to a more regular performance of its functions in dealing with the next meal." After the same manner putrescent food which is retarded within the intestines, may be corrected by Cinnamon lozenges; and constipation may be obviated by Liquorice lozenges.

At New York two tabloid restaurants have been opened of late, and with success so far in that busy, bustling city where life is all hurry, and time with most men means money. All manner of liquid foods, such as soups, beef extracts, milky preparations, cocoa, and the like, are provided in these restaurants, as compressed into lozenges, and capsules, to be sucked, or swallowed. These may consist of anything, from a cut off the joint, together with vegetables, and a sweet to follow; likewise of fish, game, mutton chops, or bread and cheese. Three lozenges taken in three minutes are said to be equal to an ordinary meal which would occupy three-quarters of an hour; and a single capsule can keep a business man going as long as a hastily-snatched mutton chop, with potatoes. The lozenge tea, and the tabloid supper, may be similarly tried for a change, so as to save time over these meals.

But, as to exhibiting food profitably in the form of lozenges, to attempt this is quite a delusion. Dr. Hutchison explains the matter thus: "If we drive off all the water from five ounces of meat, there will be left behind not more than an ounce of what is practically pure proteid nourishment. And this proceeding may be regarded as the maximum degree of concentration which can be wrought on proteid food. In other words, an ounce of any artificial food can never represent more than five ounces of lean meat. Any more concentrated proteid nutriment than that is a chemical impossibility. And one can realize hence the absurd pretensions of such alleged sustenance as is attributed to beef lozenges, and the like, two or three at a time. Even if these did consist of pure proteid (which they never do), it would require at least an ounce of them to be equal in value to five ounces of fresh meat: so that the amount of nourishment contained in a single lozenge of the sort must be very small indeed."

LUNCHEON (*See* MEALS).

MACARONI.

THERE is prepared (originally in Italy) a kind of paste from the glutinous granular flour of hard varieties of wheat, this being pressed into the shape of long tubes, or pipes, through the perforated bottom of a vessel into mandrels, and afterwards dried in the sun, or by a low degree of heat. The best Macaroni is manufactured from Semolina in such a manner, its name being derived from the Latin verb "*maccare*," to beat, or batter. Both Macaroni, and Vermicelli (a similar product), absorb about three times their weight of water in the process of cooking, so that the food thereby provided, though sufficiently nutritious, is about eight times poorer in nitrogen than a similar weight of lean beef. But these substances, in common with other Italian pastes, are made from flour rich in gluten, and they are absorbed into the system almost in their entirety : so that their use as nourishment is indicated in bodily conditions where it is desirable to leave behind as little residue within the intestines as possible. One ounce of Macaroni contains about fifty-five grains of proteid, nearly 77 per cent of starch, and only a decimal fraction of fat ; the deficiencies are generally made up by adding cheese, and eggs, with sugar, or saffron, or meat, together perhaps with tomatoes. Semolina as furnished for food is combined with yolk of egg, which is not present in Macaroni. The best Semolina is that from Genoa ; either white, as made from rice flour ; or yellow, as prepared from wheat flour ; or, if deep yellow, coloured with saffron, coriander, and yolk of egg. To boil Macaroni properly, a good fire must be ready beforehand. Cooks who will take the Macaroni from the fire to put on more coals, and who thus stop its boiling, will spoil any Macaroni, however good its quality. Macaroni requires plenty of water to cook well ; one gallon to a pound is not too much. The water must be salted first, according to taste, and when this is in full boil the Macaroni must be put in, and frequently stirred so as to prevent it from getting into a mass. When it is sufficiently cooked, a glass of cold water should be thrown into the saucepan immediately, so as to stop the boil ; and then all the water is to be strained off through a colander as quickly as possible. The Macaroni should be served hot, and immediately after it has been cooked, or dressed, so as to eat it in perfection. It should never be cut with an ordinary knife, but either with a fish knife, or eaten by means of a plated

fork, because the contact of steel imparts a bad taste, particularly if with a seasoning of tomatoes. For persons unaccustomed to eat their long Macaroni after the clever fashion of the Neapolitans, by twisting it round and round the fork, the advice not to cut it with a steel knife is especially needful.

Dressed Macaroni is a mixture of flour, cheese, and butter; and it therefore bears (as some say) the Italian name Macrhetone, a fool, or blockhead. This is after the same fashion of naming a clown, when taken as typical of his country, by a popular dish therein, such as English Jack Pudding, German Hanswürst, or Jack Sausage, or French Jean Farine, Jack Flour. The Macaroni of smaller size is called Vermicelli (little worms). An admixture of such a cereal food as Macaroni with cheese makes the latter more easy to be digested. Both Macaroni, and Vermicelli, are prepared in the greatest perfection at Naples, where they form a principal item in the food of the population. Spaghetti is an Italian Macaroni, made into cords smaller than that of Naples, and larger than Vermicelli.

To make a Macaroni and marmalade pudding, take a quarter of a pound of Macaroni, three eggs, three ounces of sugar, a very little spice of cinnamon, or nutmeg, with some orange or apricot marmalade. Boil the Macaroni till tender, drain away the water, pour over it a little milk, and allow it to cool. When cold, mix into it the eggs, sugar, and a tiny dust of the spice. Put a layer of the mixture in a pie dish, then a layer of the marmalade, and then the remainder of the Macaroni: and bake in the oven for fifteen or twenty minutes. The Macaroni should be gently boiled for one hour. Macaroni, and other sorts of Italian paste, contain only about 9 per cent of nitrogenous substances; if a healthy, well-fed man were to live exclusively on Macaroni, he would lose weight, because having to subsidize proteids from his own resources; but an addition to the Macaroni of eggs, or meat, would prevent this deficiency.

MACKEREL AND SEA FISH.

THE commercial sizes of Mackerel are "large," "seconds," "tinkers," and "blinks," according as they are of four, three, two, and one, years of growth. Robert Lovell told (1661) "Mackerel are naught for those that are troubled with the epilepsy: they are not to be used except by young strong men."

This fish is said in Somersetshire to come into season when Balaam's ass speaks in church: that is, when the chapters twenty-three and twenty-four of the Book of Numbers are read as the first lessons for the day. Mackerel contains 65 per cent of water, and 24 per cent of nutrients. Its fat is difficult of digestion for ourselves; but a young lady of the Sandwich Islands, even now, will swallow half a dozen raw mackerel for breakfast without incurring the least personal inconvenience. The fish, smoked whilst fresh, is a popular preparation in New York. Its charred bones when powdered, furnish alkaline phosphates, useful against acidity of stomach.

MALLOWS.

All the Mallows (*Malvaceæ*), to the number of a thousand, agree in containing demulcent mucilage abundantly. French druggists, and English sweetmeat-makers, prepare from the Marsh Mallow (*Althæa hibiscus*) a famous confectionery paste, *Pate de gimauve*, which is emollient, and soothing to a sore chest. The Romans esteemed this plant *in deliciis*, among their dainties, and they placed it of old as a first dish at their tables. The gently laxative properties of the Mallow as regards its leaves, and its root, were told about by Cicero, and Horace. Virgil, in one of his Eclogues, has taught how to coax goats with the Marsh Mallow :—

"Hædorumque gregem viridi compellere hibisco."

It grows wild freely in many parts of England, especially about marshes near the sea coast. The root is sweet, and very mucilaginous when chewed, containing more than half its weight of saccharine viscous mucilage. It is therefore well calculated to subdue irritation in hot, and inflamed parts, being much employed in domestic poultices, also in decoction as a medicine for pulmonary catarrhs, hoarseness, and painful diarrhœa. Gerarde says: "The leaves be with good effect mixed with fomentations, and poultices, against pain of the sides, of the stone, and of the bladder; also in a bath they serve to take away any manner of pain." The decoction is to be made by adding five pints of water to a quarter of a pound of the dried root, then boiling slowly down to three pints, and straining through calico. Likewise Marsh Mallow ointment is a popular

remedy, particularly for mollifying heat; and hence it was deemed invaluable formerly by those persons who had to undergo the ordeal of holding red-hot iron in their hands as a rapid test of their moral integrity. The Common Mallow is a familiar roadside plant, with large downy leaves, and streaked, purple, trumpet-shaped flowers, which later on furnish round seeds resembling small buttons, the same being known to rustics as "cheeses." Schoolboys are fond of eating these because of their nutty flavour, calling them "bread and cheese." Clare recalls the time when he sat as a lad :—

> "Picking from Mallows, sport to please,
> The crumpled seed we called a cheese."

Pliny said in ancient times, "Whosoever shall take a spoonful of the Mallows shall that day be free from all diseases that may come to him"; but the roots of the Common Mallow do not yield equally efficacious parts. In France the young tops, and tender leaves of the Marsh Mallow are eaten uncooked, because serving to stimulate the kidneys; for which same purpose a syrup is also made from the roots, with cold water, and sugar added thereto. These roots contain starch, mucilage, pectin, oil, sugar, asparagin, phosphate of lime, glutinous matter, and cellulose. An infusion thereof made with cold water takes up the mucilage, sugar, and asparagin, without the starch. The laxative quality of the Common Mallow was told about by Martial :—

> "Exoneraturas ventrem mihi villica Malvas
> Attulit, et varias quas habet hortus opes."

The Geranium is said to have been originally a Mallow. Mahomet, having washed his shirt while on a journey, hung it on a Mallow to dry, and the plant became therefore promoted to become a Geranium. Again, the Hollyhock of our gardens (*Alcea rosea*) is a Mallow, possessing nearly all the virtues of Marsh Mallow. Evelyn, in his *Book of Sallets*, tells that Nonius has commended "the tall Holihock that bears the broad flower" for the best, and very laxative :—

> "Nulla est humanior herba,
> Nulla magis suavi commoditate bona est:
> Omnia tam placide regerat, blandeque relaxat,
> Emollitque vias, nec sinit esse rudes."

Writing about the *Malva crispa* (curled Mallow) Gerarde commends its salutary properties thus :—

> "If that of health you have any speciale care,
> Use French Mallowes, that to the body holsome are."

He reminds us that "The French, with their early spring sallets, intermix the young tops, and tender leaves of the Marsh Mallow, which they call *Gimauve*, for a most admirable *nephritick*."

MALT.

STARCH, such as that contained in the grain of cereals, Barley to wit, if subjected to moist heat begins to undergo fermentation, and is presently converted into sugar—maltose—at which stage further fermentation may be arrested by dry heat, the whole process being that of malting. Then if an extract is obtained from the malted grain, and some of it in a syrupy form is given together with foods which are starchy, this will materially aid their digestion, in a weakly person, by stimulaing their saccharine fermentation in the stomach. For instance, a specially digestible pudding may be made thus : Stir an ounce of ground malt into a pint of hot, but not boiling milk ; strain through a sieve, and add the milk to two ounces of well-soaked rice. Mix well, and stand for ten minutes in a warm place ; then bake for an hour. But it is to be noted that the diastase, or active principle of malt, is killed by a temperature higher than 147° Fahrenheit. For preparing a Malt extract which the patient of feeble digestive powers may take with farinaceous starchy foods, three piled tablespoonfuls of crushed Malt are to be soaked in half a pint of cold water over night, and strained through muslin until clear, on the next morning. This liquid may be preserved in a tightly-corked bottle, with the addition of a teaspoonful of good brandy; though it is better to make it fresh every day. Add one tablespoonful thereof to a basin of milk, or gruel, for malting the same.

From the manufacturing chemist convenient Malt-extracts can be now procured, which are prepared by evaporating down an infusion of malted barley at low temperatures, or *in vacuo*, so as to preserve in an active form the diastatic ferment present in the Malt ; these extracts being given with the view of enriching the supply of carbohydrates in the diet, and helping to malt the starchy foods which are taken additionally. Dr. Hutchison

says, however, that for persons with whom the digestion of starchy foods is difficult, a Malt extract is not the best preparation to employ. It will be a far more certain plan, and cheaper, as well as pleasanter, to make an infusion of Malt at home, and to either use it as a beverage at meals, or preferably to stir some of it into the starchy foods, such as puddings, gruel, etc., before they are eaten.

Dr. Ringer directs that the Malt extracts, if given for the reasons we have stated, should be sipped during the progress of a meal whereat any starchy food is eaten. "Do not," says he, "as is frequently advised, give the Maltine, or Malt-extract at the end of a meal, when admixture of the food mass with the acid gastric juice secreted by the stomach during first digestion is now well advanced." Though Professor Foster tells, as a physiological fact that the acidity of the stomach's contents promptly after a meal is at first quite feeble; indeed, with man, in some cases at least, for some time after the beginning of a meal no free acid is present in the stomach, and during this period the conversion of starch into sugar may continue therein uninterruptedly, with neutral surroundings.

The making of malted bread consists in adding to its substance some Malt extract, obtained by evaporating an infusion of malted barley to a syrupy consistence at a low temperature. This contains the ferment, diastase, which is able to convert starch into soluble substances (maltose, and dextrin). When therefore Malt extract is mixed in the dough with its part of the starch, this latter is ultimately converted into Malt sugar, and dextrin. In other words, part of the starch is digested. But it is important to remember that this ferment diastase, is readily killed if exposed to a high temperature: hence its activity inevitably ceases whenever the bread enters the oven. If then any considerable part of the starch of the dough is to be converted, the Malt-extract must be added very early in the process. (Dr. R. Hutchison).

Malt extract is of two-fold value,—as a drug, and as a food. It converts the starches into sugar, thereby affording warmth and fat; so that in health the relative effect of a meal of bread and cheese, taken with or without some wholesome beer of malt and hops, was well recognized by our working folk long before any special preparation of Malt extracts became introduced. Thus it is that good London porter, and nourishing stout, are

well understood to possess a nutrient value independent of their moderate percentage of alcohol, particularly for thin and weak invalids.

A Malt extract of established repute as the parent of all those now supplied for helping the invalid, (and declared by the *Lancet* to supersede them) was introduced by Hoff, of Hamburg, in 1862, and still holds a supreme place in medical esteem. It is a soluble carbohydrate, being thus an ideal fat-former ; and whilst almost entirely free from alcohol, it will serve as an excellent substitute for alcoholic drinks, since the next step to saccharine fermentation in starchy foods is that of the vinous change, (a measure of which most probably occurs as digestion goes on to its completion.) Thus it happens, moreover, that the Hoff's Malt extract helps to soothe nervous disquietude, or wakefulness at night. A small wineglassful is given, either warm, or cold, together with a principal meal, either once or twice daily. This extract is not fermented after the manner of Malt liquors in general, which always provoke further acid fermentation with gouty persons, and give trouble to their kidneys. Dr. Hutchison instructs his readers, that as to augmenting the supply of carbohydrates, or converted starch-products, by giving Malt extract, the fact is that treacle and golden syrup contain a considerably higher percentage of sugar, and are much cheaper, though Malt sugar is less apt to disagree, since it cannot be directly taken up into the system. On mixing about one part of Malt, ground into flour, with from four to eight parts of oatmeal, an excellent and easily digested material for porridge is obtained, which is strongly to be commended for persons of feeble digestion. Mattieu Williams teaches that by adding the ferment principle (diastase) of vegetables to materials which are starchy, we transform the tissues thereof into dextrin and sugar ; on which principle he once converted an old pocket handkerchief, and part of an old shirt, into sugar, (but not profitably as a commercial transaction). Such sugar is glucose, like that of honey and of grapes. It is less sweet than cane sugar, or that of beet, but a better food. When Sydney Smith was at Foston, in Yorkshire, where he built the " Rector's Head " Tavern, he gave fermented grains to his pigs, which afterwards " went fuddled about their sty, grunting God Save the King."

Under stress of circumstances other vegetable matters than barley can be used for brewing an acceptable kind of beer as a

wholesome beverage. In the first recorded American poem, written during 1630, when civilization there was as yet primitive, and "the place where we lived was a wilderness wood," it was told :—

> "If barley be wanting to make into malt,
> We must fain be contented, and think it no fault,
> For we can make liquor to sweeten our lips
> Of pumpkins, and parsnips, and walnut-tree chips."

Vinegar (*vin-aigre*), sour wine, is commonly procured from an infusion of Malt which has previously undergone the vinous fermentation, or perhaps from apple cider. White vinegar is the best sort, then Malt vinegar, and least acceptable, though chemically pure, is the diluted acetic acid got from the products of the dry distillation of wood. More properly, Vinegar ought to be obtained by the acetic fermentation of wine, but this is difficult to procure. "Ordinary English vinegar," says Dr. A. Blyth, speaking authoritatively, "as far as the kitchen is concerned, is a chemical monstrosity." We should try to buy French vinegar from a respectable Italian warehouseman. Herbal vinegar must not be boiled. The acid of vinegar, being a fermentation acid, renders the digestion of many foods with which it is taken more difficult, whilst vegetable acids, such as lemon juice, and citric acid, or tartaric acid, do not cause that objectionable effect. Thus a cucumber salad (to be made with the vegetable freshly cut) when dressed with vinegar is so difficult of digestion as to be for some persons almost poisonous; whilst if dressed with lemon juice, it can be easily and comfortably digested by the very same persons. Vinegar is the antiseptic ingredient in pickles; when applied externally its cooling effects, and fragrant aroma are refreshing; they even serve to revive a person faint from heat, or other aggressive surroundings. Thus it is told in *Pickwick*, that at Manor Farm, Dingley Dell, "the landlady proceeded to vinegar the forehead, beat the hands, titillate the nose, and unlace the stays of the maiden aunt."

The hindering effect of Vinegar on our salivary digestion of starches is very powerful, and the bearing of this fact on our using it in salads together with the vegetable carbohydrates is evident. Nevertheless, salads are commonly seasoned with vinegar in plenty, and they are generally eaten together with a free use of bread. The acid may perhaps aid the digestion of the vegetable albumin in the salad, but it is obvious that at the

same time this vinegar would altogether prevent any salivary action on the bread taken with the salad. The difficulty may not be a matter of much moment to a person with strong digestive powers, who has abundant digestive resources: but others who are of weak digestive capabilities, must be sparing in their use of such vinegar in salads, and other sour dishes, when bread or potatoes accompany the same, or when a starchy pudding follows. One compensating result of Vinegar on the fibre of meat, and the tough cellulose of vegetables, is its softening action thereupon. From the *Arcana Fairfaxiana*, of three centuries back, as already quoted, we learn "how to quench thirst when drink is improper." "Pour vinegar into the palm of the hand, and sniff it up into the nostrils, and wash the mouth with the same (though not swallowing any); 'tis inconceivable how much it will allay thirst." By a strange misprint, in an edition of the Bible, published at the Clarendon Press, Oxford, in 1717, the heading of the "Parable of the Vineyard," in St. Luke's gospel, chapter xx, is made to read, "Parable of the Vinegar."

Because of its being a product of acid fermentation outside the body, Vinegar will sometimes serve to correct the sour fermentation which occurs from imperfect digestion of swallowed foods, such as sugars, starches, and melted fats, by giving a teaspoonful of the pure Malt product, by itself, or with an equal quantity of cold water. This proceeding may be said to be adopted on the principle of "setting a thief to catch a thief." Acetic acid, as sometimes substituted for the vinegar of fermentation, is obtained by the oxidization of alcohol, and the distillation of organic matters in hermetically-sealed vessels. This acid is inflammable, so that great caution is needed when adding it to boiling sugar; it is to be used only in small quantities.

"Before proceeding to the Legacy Duty Office about proving the will of his late wife, Mr. Weller, senior, and his fellow coachmen, as witnesses, bethought themselves of having a drop of beer, and a little bit of cold beef, or a oyster. These viands were promptly produced, and the luncheon was done ample justice to. If one individual evinced greater powers than another it was the coachman with the hoarse voice, who took an imperial pint of vinegar with his oysters, and did not betray the least emotion" (*Pickwick*). Although the acetic acid which vinegar contains is ultimately oxidized in the body, with a production of alkaline compounds, yet still there is reason to believe, that

through its being an acid of fermentation it has an unfavourable influence in gout, and may even induce an attack, not otherwise imminent.

The best vinegar now used is a fruit acid, either from apples, or grapes ; it is also made from the red and white wines, or from sour beer as Malt vinegar.

MARMALADE.

ORIGINALLY "Marmelada," so named from the Spanish "*Marmelas*," or Quince, was a confection of that fruit. But the appellation has become extended to those of the Orange, the Lemon, and other fruits, as "preserves" of pulpy consistence, made with sugar, though these ought rather to be termed jams. There is a Marmalade tree (*Lucana mammosa*), which yields a fruit of which the juice resembles Marmalade. Pepys, in his diary, November, 1663, tells that "after a good dinner I left Mrs. Hunt and my wife making a Marmelett of quinces." Dr. Johnson was disliked personally by Mrs. Boswell, and he knew it, but on one occasion she sent him as a conciliatory offering a jar of her Marmalade. "Tell Mrs. Boswell," wrote he to her husband, "I shall taste her Marmalade cautiously at first : *timeo Danaos, et dona ferentes.*" In Hardy's *Tess of the Turbervilles*, the embellisher of "little Sorrow's grave" favours the Marmalade "of one particular maker." The respective sorts of Marmalade form capital vehicles for fruit virtues as of curative use, each according to the constituent juices and salts which are thereby represented. That of the bitter Seville Orange, is certainly a gentle and pleasant laxative. Orange Marmalade is of such widespread use that no directions need be given for its manufacture, always provided the materials are genuine. A widespread, and well-merited preference is given to the noted firm (Frank Cooper) at Oxford, favoured by its Colleges, from Dan even unto Beersheba. Again, Orange Marmalade with honey, is excellent against constipation. For Lemon Marmalade, capital against scorbutic troubles : boil one pound of fresh lemons in one pint of water for two hours. Change the water, and replace it with the same quantity of boiling water. Then cut the lemons into small thin slices, taking out all the pips. To each pound of fruit thus prepared add two pounds of loaf sugar. Put the sugar in a stew-pan with half a pint of water to each pound of sugar ; when this

is quite dissolved add the fruit, and boil for half an hour, stirring all the time. Or, take some nice lemons, and cut them very thin, remove all the pips carefully, and to each pound of fruit allow three pints of cold water; let it stand till next day, then boil all together until tender; next pour into a large bowl, and again let it stand until the morrow; weigh it, and to every pound of fruit add one and a half pounds of good loaf sugar: boil all together till it jellies, and the chips are quite transparent, which will take three-quarters of an hour after it has come thoroughly to the boil.

The dietetic use of Lemons, and of lemon-juice, will obviate a disposition to gall-stones, as frequent experience has shown. A pretty table device is to be made with the Lemon, by holding it lengthwise upright, and then towards the upper end cut out from each side a small quarter, leaving a handle of the peel between. Scoop out the juicy pulp from within the handle, but leave it entire in the body of the basket made in this way; then cut horizontally a small slice from the bottom, and so that the lemon may be able to stand upright. It will be an elegant serving accompaniment with smelts, or pancakes, putting for the former this little basket in the centre of a plate, with a garnish of parsley, and with rolls of brown bread and butter around.

Quince Marmalade is famously cordial, strengthening both the stomach, and the heart,—as meat, and as medicine. It is the true claimant to the name Marmalade. This fruit (*coignasse*) of the *Pyrus cydonia*, is when raw, hard and austere, with a strong characteristic odour and taste (which can be chemically reproduced as œnanthic ether). It is then an astringent fruit to stay diarrhœa; and a syrup may be concocted from its uncooked juice for such a purpose. The quince is made edible by boiling, or baking, being used frequently for preserves, pies with apple, and for Marmalade aforesaid. For making this last confection, to every pound of quince-substance allow three-quarters of a pound of loaf sugar. Slice the quinces into a preserving pan, adding sufficient water for them to float: place them on the fire to stew till reduced to a pulp, keeping them stirred occasionally from the bottom to prevent their burning: then pass the pulp through a hair sieve to keep back the skin and seeds. Weigh the pulp, and to each pound add lump sugar as directed above, breaking this very small. Place the whole on the fire, and keep it well stirred from the bottom of the pan with a wooden spoon, until reduced to a Marmalade; which may be known by dropping a little on

a cold plate, when, if it jellies, it is done. Put it into jars whilst hot, let it cool, and cover with pieces of oiled paper cut to the size of the jar tops. Three hours should be the time for boiling the quinces without the sugar, and three-quarters of an hour to boil the pulp with the sugar. In olden times a famous pie was made mainly from this fruit. The *Art of Cookery* (1709), relates how one

> "Trotter, from Quince and Apples first did frame
> A pye, which still retains his proper name;
> Though common grown, yet with white sugar strewed,
> And butter'd well, its goodness is allowed."

Furthermore, the Quince had a former reputation for curing "Ye toothache, if it proceeds from heate," as "a certain remedy." In the *Arcana Fairfaxiana* (1695), we may read: "Take two or three Plantain leaves, cut them smalle with a knife, and putt them in a little piece of linninge cloathe, and straine 2 droppes of quince into ye partie's contrary eare, and before you can tell to 20, ye cure is done." The seeds of a Quince (some sixty within each fruit) swell out when soaked in water, and develop a demulcent mucilage which contains salts of lime. Quince wine is sometimes made, which has an astringent effect in chronic diarrhœa. This fruit is almost entirely free from acid. An after-taste suggestive of garlic, is left on the palate by the Marmalade, or by Quince syrup.

Another Marmalade, that of Apricots, is useful for subduing the nausea of a stomach qualmish through nervous indigestion. Take four pounds of sound ripe Apricots, with two and a half pounds of sugar; stone the fruit, and put it into a pan with a sufficient quantity of water, and boil it up a few times: throw it into a sieve to drain it, then pulp it in the colander, and throw the pulp, the sugar, and a few of the kernels (blanched) from the broken stones, into a preserving pan. Cook the whole, whilst constantly stirring it with a wooden spoon. When the mixture has reached the consistency of jelly, or when the mass boils in such a manner that you can see the bottom of the pan, take the marmalade off the fire and put it into pots. If thoroughly ripe Apricots are used, it is not necessary to cook them in any water. They are fragrant because of their perfumed skin, and somewhat laxative when eaten freely. At Cairo a luscious paste is made from the plentiful fruit, with which almond kernels are incorporated.

Gerarde told that "the Marmalad, or Cotiniat, made of quinces,

and sugar is good, and profitable to strengthen the stomach, that it may retain and keep the meat therein until it be perfectly digested. It also stayeth all kinds of fluxes both of the belly, and of other parts, and also of blood. Which Cotiniat is made in this manner. Take four quinces, pare them, cut them in pieces, and cast away the core; then put into every pound of quinces a pound of sugar, and to every pound of sugar a pint of water. These must be boiled together over a still fire till they be very soft; next let it be strained, or rather rubbed through a strainer, or a hairy sieve, which is better. And then set it over the fire to boil again until it be stiff; and so box it up, and as it cooleth put thereto a little rose water, and a few grains of musk, mingled together, which will give a goodly taste to the Cotiniat. This is the way to make Marmalad."

Quinces contain malic acid, and exhale a strong volatile odour by their skins. The ancients regarded this fruit as the emblem of happiness, and love; it was dedicated to Venus.

MARROW FROM ANIMAL BONES.

WITHIN the interior of bones from a newly-slaughtered animal, there is found a soft tissue possessing salutary virtues, whether this is obtained from the cylindrical hollow of long bone shafts, or from the cancellated interior of flat bones. Ordinary marrow from the former source is a soft yellow solid, consisting of about ninety-five per cent of fat; whilst the red bone marrow from the flat bones of the skull, breast, ribs, and spine, is softer, and contains very few fat cells, but numerous marrow cells, and others resembling the nucleated red corpuscles of the unborn infant. The spinal marrow is a tissue of an entirely different character from the marrow of the bones, whether long, or flat. It is found in the perpendicular cavity running throughout the chain of the spinal column, or divisions of the backbone. Said Browning of Sordello:—

> "He was fresh-sinewed, every joint,
> Each bone new-marrowed, as whom Gods anoint,
> Though mortal, to their rescue."

"Marrow," quoth Dr. Tobias Venner, in *Via Recta* (1620), "is much more laudable than the braine, for it is sweeter, and pleasanter, of a firmer substance, and of an hot and moist temperature; it maketh much good, and pure nourishment;

it increaseth the geniture, and excellently sustaineth, and restoreth the vitall moisture. Moreover, it mollifieth the passages of the throat, and lenifieth the asperitie of it, and delighteth the stomacke, so that it be moderately taken; but if it be immoderately used, it mollifieth and relaxeth the stomacke, taketh away the appetite, and induceth a disposition to vomit." Within the last few years our modern physicians have likewise learnt that animal marrow possesses special reparative powers for ailing and weakly persons who lack spinal strength, and red blood. Physiologists now teach that the red marrow within the flat bones is undeniably the birth-place of the red blood corpuscles as regards ourselves, and they make use of such red marrow from sound animals, freshly killed, for administering to bloodless patients, so as to stimulate their fresh blood formation. The animal marrow further contains some iron in a natural state, and fat in an easily assimilated form. Rapid improvement has been obtained for children by giving red bone marrow in rickets, spinal curvature, and diseases of the bones. Sheep's marrow includes less solid fat, and more liquid fat than that of the ox. The marrow of bones is esteemed as a luxury even among savages. North American Indians hold it in high respect. They roast the round bones of the buffalo, elk, moose, and the deer, on the coals, then split these bones with a stone hatchet, and sometimes a wedge is driven in between the condyles. The marrow is scooped out with a rough wooden spoon, and eaten on the instant by the members of the party seated around the camp fire. Moreover, during the hunting season, marrow is collected by them in quantity for storing, and is packed in bladders, together with other marrow from the spinal bones. Likewise, among the Laplanders, and the Greenlanders, marrow, still warm from the natural heat of a freshly-slaughtered animal, is considered a supreme delicacy, and the dish of honour to be set before distinguished strangers.

Among *Secrets in Physick and Chirurgery* (1653) by the Right Honourable Countesse of Kent, there is given as "a strengthening meat: take potato roots, roast them, or bake them, then pill them, and slice them into a dish; put to it lumps of raw marrow, and a few currants, also a little whole mace, and sweeten it with sugar to your taste, and so eat it instead of buttered parsnips." In the *Arcana Fairfaxiana Manuscripta*, nearly three centuries old, is ordered "a caudle to strengthen ye backe." "Take ye

pith of an oxe-back, a good quantity. Wash it, clean, and dry it; take ye skinne off, and beat it, and strain it with wine, or ale; take two spoonfuls of oatmeal searced (sifted), and juice of comfer (comfrey), and clary, knottgrass and plantain; take half a pinte of their juice, ye yolkes of two egges; make it in ye form of a caudle. Season it with cinnamon, and nutmeg, and sugar." Cooks of to-day find that the distinguishing virtues of marrow on toast are emphasized by adding a few drops of the best anchovy sauce. Beef marrow remains fluid at a lower temperature than any of the ordinary animal fats, so that it is more readily absorbed into the system as nutritive food.

Recently there has been introduced by the manufacturing chemists an excellent combination of red bone marrow, malt extract, fresh eggs, including the shells for their lime salts, and fresh lemon-juice. In the seventeenth century the Restoration of the Royalty after the end of the Commonwealth, brought with it a revival of French cookery, under the guidance of Giles Rose, chief cook to Charles II. He restored marrow pies, and bacon tarts, but only for a short time, since when they have disappeared. The modern way for obtaining marrow dietetically is to take a split beef marrow bone, remove the marrow, and put this into a stewpan with enough cold water to cover it: add a little salt, and just scald it; next take it up, and cut it through into nice thick slices about a quarter of an inch thick; the marrow thus prepared may then be used for cooking, or other service. Quite lately a claim for bone marrow (as chemically *myocene*) is advanced by certain doctors, to be employed towards curing middle-ear deafness, such marrow being antiseptic, and "an internal secretion of vital importance to the economy." It is said to be powerfully remedial against the injurious action of various bacteria which invade, and become morbidly active within the body, and set up mischief such as the deafness in question, if a deficiency of this internal secretion occurs. The bone-marrow oil is likewise to be employed topically within the ear, together with the use of gentle massage.

MARROW, VEGETABLE. *Cucurbita ovifera*, (*See* VEGETABLES).

MEALS.

THAT diseases can be treated medicinally throughout their course from first to last by food constituents taken at meals,

which food principles identically represent drugs as given heretofore in mixtures, pills, or powders, periodically every few hours, is our present unhesitating contention. With this view our endeavour is to prove the facts by an analytical comparison of the prescribed foods with the pharmaceutical preparations of the chemist; and to supply a code of foods fully as remedial, which the doctor may confidently order at his daily visit, and which the patient will gratefully appreciate. Meantime, something of interest is to be said here about meals in general, both of past times, and of the present era. Early Breakfast, for instance, had its beginning in 1463, and up to a century ago was a light, trifling meal. Queen Elizabeth and her Court rose at six, drank their morning ale, with brawn, at seven, and dined at 11 a.m. Cromwell dined at half-past one p.m. In 1750, five o'clock p.m. was the fashionable dinner hour; and towards the close of the eighteenth century breakfast parties began to be given at noon. Lord Chesterfield, in his famous letters to his (natural) son (1774), wrote: "I am convinced that a light supper, a good night's sleep, and a fine morning have not infrequently made a hero of the same man who through indigestion, a restless night and a rainy daybreak would have proved a coward." "Lord Chesterfield," said *The Edinburgh Review*, "was the wittiest man of quality of his time." George the Second dubbed him "a little tea-table scoundrel." He married a lady who is believed to have been a daughter of George the First. Boswell tells in his *Life of Dr. Johnson*, that the great doctor "thought of Chesterfield as a lord among wits, but found him only a wit among lords"; whilst concerning the famous letters of this Lord Chesterfield to his son, "they teach the morals of a whore, and the manners of a dancing-master." "Hope" (unsubstantial food), said Lord Bacon, "is a good breakfast, but a bad supper," (when better nourishment is needed).

"Breakfast! come to breakfast!
Little ones, and all!
How their merry footsteps
Patter at the call!
Break the bread: pass freely
Milk which cream-like flows!
A blessing on their appetites,
And on their lips of rose!"

Dinner may be pleasant:
So may social tea:
Yet methinks the breakfast
Best of all the three.

With its smile of welcome,
Its holy voice of prayer,
It forgeth heavenly armour
Against the hosts of care."

As to the English "country Sunday," and its substantial meat and drink at the mid-day meal after morning service, especially with the Chapel-goers, Richard Jefferies has told in his eloquent Saxon speech (*Field and Hedgerow*, one of his last essays): "There is no man so feasted as the Chapel pastor. His tall, round body, and his broad, red face might be taken for the outward man of a sturdy farmer, and he likes his pipe, and glass. He dines every Sunday, and at least once a week besides, at the house of one of his staunch supporters. It is said that once at such a dinner (in a Sussex yeoman's homestead), after a large plateful of black currant pudding, the pastor, finding there was still some juice left, lifted the plate to his mouth, and carefully licked it all round; the hostess hastened to offer a spoon, but he declined, thinking that his way was much the best for gathering up the essence of the fruit. So simple were his manners, he needed no spoon; and, indeed, if we look back, the apostles managed without forks, and put their fingers in the dish."

The ancient Greeks had as their meals *acratisma* (breakfast), *deipnon*, or *aristin* (as early dinner), and *darpee* (supper, or late dinner); their *hesperisma* corresponded to our five o'clock tea. The Romans had *pentaculum* (breakfast), *prandium* (luncheon), and *cœna* (dinner). The old Low Latin term for the noonday meal was *merenda*, as suggesting the notion of food to be earned before it was enjoyed. So in Friar Bacon's poem, *A Prophesie*, (1604) it stands declared that "in the good old days he that wrought not till he sweated was held unworthy of his meat." The modern luncheon, or nuncheon, was the archaic *prandium*, or under-meat, displaced by our breakfast, but which then came between the noontide dinner, and the evening supper. Nowadays to some persons, fond of outdoor daily life, and sunshine, and the beauties of nature, a mid-day solid meal is distasteful, and repugnant. Thus pronounces Elizabeth (in the *Solitary Summer*) when called from the green fields, and the intellectual enjoyment of life in the fresh country air, to the heavy, substantial family luncheon within doors: "Luncheon is a snare of the tempter, and I would fain try to sail by it like Ulysses (tied to the mast)

if I only had a biscuit to comfort me; but there are babies to be fed, and the man of wrath, my husband: and how can a respectable wife and mother sail past any meridian shallows in which those dearest to her are sticking? So I stand by them, and am punished every day by that two-o'clock-in-the-afternoon feeling to which I so much object, and yet cannot avoid. It is mortifying after the sunshiny morning hours at my pond, when I feel as though I were almost a poet, and very nearly a philosopher, and wholly a joyous animal in an ecstasy of love with life, to come back, and live through those dreary luncheon-ridden hours when the soul is crushed out of sight, and sense, to take up with cutlets, and asparagus, and revengeful sweet things." Cotton, who collaborated with Izaak Walton in *The Compleat Angler*, said: "My diet is always one glass of ale so soon as I am dressed, and no more till dinner." Viator, in the same noted book, exclaims, "I will light my pipe, for that is my breakfast too." The word lunch is literally (Welsh) a lump, and was at first simply a lump of bread and cheese taken between meals. At the Restoration period dinner never began with soup, and the fish was usually served together with the meats. Nearly every man dined wearing his hat, as the draughts in the dwellings were ghastly. Only one knife, and one fork, were placed before each diner, even at the Royal table, whilst at most dinners forks were an unknown quantity. "Dinner," as a modern writer declares, "should never be eaten without a Seventeenth Century Poet, in an old yellow-leaved edition, being on the table, not to be read, of course, any more than the flowers are to be eaten, but just to make a music of association very softly to our thoughts! Dinner is a mystery! a mystery whereof the greatest *chef* knows but little!" "Even our digestion is governed by angels," said Blake, "and (if you will but resist the trivial inclination to substitute 'bad angels') is there really any greater mystery than the process by which beef is turned into brains, and beer into beauty? Every handsome woman we see has been made out of beef-steaks, and the finest poem that was ever written came out of a grey, pulpy mass such as we make brain-sauce of."

Captain Gronow, formerly of the Grenadier Guards, wrote in his *Reminiscences* (1862) concerning "Diet, and Cookery in England," as he remembered them, in the early part of the eighteenth century: "Even in the best houses, when I was a

young man the dinners were wonderfully solid, hot, and stimulating. The *menu* of a grand dinner was thus composed: Mulligatawny and turtle soups were the first dishes placed before you; a little lower the eye met with the familiar salmon at one end of the table, and the turbot, surrounded by smelts, at the other. The first course was sure to be followed by a saddle of mutton, or a piece of roast beef; and then you could take your oath that fowls, tongue, and ham would as assuredly succeed as darkness after day. The universally adored, and ever popular boiled potato, produced at the very earliest period of the dinner, was eaten with everything up to the moment when the sweets appeared. Our vegetables, the best in the world, were never honoured by an accompanying sauce, and generally came to the table cold. A prime difficulty to overcome was the placing on your fork, and finally in your mouth, some half-dozen different eatables which occupied your plate at the same time; for example, your plate would contain, say, a slice of turkey, a piece of stuffing, a sausage, pickles, a slice of tongue, cauliflower, potatoes, and perhaps something more. A perpetual thirst seemed to come over people, both men and women, as soon as they had tasted their soup; and from that moment everybody was taking wine with everybody else until the close of dinner, and it was such wine as produced that kind of cordiality which frequently passes into stupefaction. From the bazaar of all these good things, according to habit and custom, a judicious, and careful selection had to be made, with the endeavour to place a portion of each in your mouth at the same moment. In fact, it appeared to me that we used to do all our compound cookery between our jaws. How all this eating and drinking ended was obvious, from the prevalence of gout, and the necessity (for everyone) of making the pill-box their constant bedroom companion."

"Better," said Solomon, the wisest of men, "is a dinner of herbs where love is, than a stalled ox, and hatred therewith." Miss Horace Smith, of *Rejected Addresses* parentage, went on an occasion to the theatre at Brighton, and being asked after returning home if she had enjoyed herself, replied, "It was all dull; the house was nearly empty: there was no one in the stalls, *not even an ox.*" As to relish for a meal, the French proverb "*l'appetit vient en mangeant*" embodies an indisputable truth—"Often will the relish increase as the meal progresses";

moreover, the sight of others eating is appetizing of itself. Major Loder, in Thackeray's *Vanity Fair*, is credited with a remark which goes to prove the truth of this assertion: "Come away into the supper room, Mrs. R.," he says to the guileless Becky; "seeing these nobs grubbing away has made me peckish, too."

In. or about the year 1600 it was customary to "dyne at XI of the clocke." For instance, "My Lady Cholmeley, having ordered her household during one morning, and instructed her many daughters in their various duties, went round her domaine from hop garthe to hen yard, from linen closet to larder, prying, tasting, and admonishing, until her family was call'd together to dyne at noon." During the time of Louis XIII of France the dinner was announced by blowing a horn, and thence came the order "*Cornez le diner*," leading to naming the viands "Corned beef," etc. "We had pudding before meat in my day," says Mr. Holbrook, the old-fashioned bachelor-yeoman in *Cranford* (Mrs. Gaskell, 1863). "When I was a young man we used to keep strictly to my father's rule, 'No broth, no ball: no ball, no beef,' and we always began dinner with broth; then came the suet puddings boiled in the broth with the beef; and then the meat itself. If we did not sup our broth we had no ball, which we liked a deal better; and the beef came last of all. Now folks begin with sweet things, and turn their dinners topsy turvy." In the familiar nursery rhyme of *Froggy would a-wooing go*, the same practice is clearly alluded to with regard to the little dinner, of which a *menu* is given in the song's refrain, —"Roly, poly" (pudding), followed by "gammon (of pork), and spinach"; quite a satisfying repast, though probably the first course of *jam roll* didn't digest comfortably, because immediately afterwards, "Heigho! said Roly."

The great Duke of Wellington, when journeying through France with Alava in 1814, invariably on being asked at what time of the coming day they should next start, replied, "At daybreak"; and to the question what they should have for dinner, answered, "Cold meat." "*Je les ai eu en horreur, à la fin*," Alava declared; "*ces deux mots la-daybreak, et cold meat.*" Thackeray, as one of the last generation, dined early :—

> "A plain leg of mutton, my Lucy,
> I prithee get ready at three!
> Have it smoking, and tender, and juicy,
> And what better meat can there be?

To "dine with Duke Humphrey" (buried at St. Alban's, 1446) was to wander dinnerless about his tomb; whereupon Quin is supposed (in an epigram by Garrick) to have soliloquized thus concerning the embalmed Duke below:—

"A plague on Egypt's arts, I say:
Embalm the dead! on senseless clay
Rich wines and spices waste!
Like sturgeon, or like brawn shall I!
Bound in a precious pickle lie
Which I can never taste?

Let me embalm this flesh of mine
With turtle-fat and Bordeaux wine,
And spoil the Egyptian trade!
Than Humphrey's Duke more happy I:
Embalmed alive old Quin shall die,
A mummy ready made!"

When Mr. Pickwick and Bob Sawyer reached Towcester, dripping wet from outside the coach, at the "Saracen's Head," "A werry good little dinner," said Sam Weller, in attendance upon them, "can be got ready in half-an-hour,—pair of fowls, Sir, and a weal cutlet, French beans, taturs, tart, and tidiness. You had better stop vere you are, Sir, if I might recommend! Take adwice, Sir, as the doctor said." Again, when Bob Sawyer and Benjamin Allen were having a nap, they were roused by the mere whispering of the talismanic word "dinner" in their ears; and to dinner they went, with "good digestion waiting on appetite, and health on both, and a waiter on all three."

At the Supper given in her lodgings by Miss Snevellicci, of the Theatre Royal, Portsmouth (see *Nicholas Nickleby*, 1838), to her parents after a benefit performance, and to which Mr. Johnson (Nicholas), the leading actor, was specially invited, "the cloth was laid, under the joint superintendence of all the ladies, upon two tables put together, the one being high and narrow, and the other low, and broad. There were oysters at the top, sausages at the bottom, a pair of snuffers in the centre, and baked potatoes wherever it was most convenient to put them." Samuel Pepys, when at the Hague (in 1660), "gained admission late one evening to the 'Prince of Orange'; this done, we went to a place we had taken to sup in, where a sallet, and two or three bones of mutton were provided for a matter of ten of us, which was very strange."

The famous Dr. Johnson seems, according to Leslie Stephen, to have "eaten like a wolf,—savagely, silently, and with undiscriminating fury." He was not a pleasant object during the performance; he became totally absorbed in the business of the moment; a strong perspiration broke out, and the veins of his forehead swelled. He liked coarse, satisfying dishes,—boiled pork, and veal pie, stuffed with plums, and sugar; whilst in regard to wine he seems to have accepted the doctrines of the critic of a certain fluid (professedly "Port") who asked, "What more can you want? It is black, it is thick, and it makes you drunk." Moreover, he would pour oyster sauce over his plum-pudding. Sydney Smith, remonstrating with Sir George Phillips by letter (1829), wrote: "And now, Sir George, let me caution you against indulgence in that enormous appetite of yours; you eat every day as much as four men in holy orders, and yourself a layman!"

There seems to be without doubt an evident relation between the increased consumption of meat as food, and the frequent occurrence of appendicitis (or obstruction of the little worm-like process attached where the small intestines terminate in the first pouch—cæcum—of the large bowels), which has recently taken to prevail so commonly. Plain meals, and fasts, have become almost completely banished from amongst us; and in towns where this appendicitis has grown more frequent of late, flesh food is now the chief nutriment. "I have seen," says Dr. Keen, "lately a number of cases of appendicitis among young subjects, who had been reared on animal food, at a period when the nourishment ought to have consisted exclusively in a milk diet." Among the large cities of the United States of America, appendicitis obtains so widely that it is estimated one-third of the population is attacked by this trouble. In the majority of cases it would appear that the small tube of the appendix is invaded by a particular microbe, the *Bacillus coli communis*. Modern teaching says that this appendix is more than an obsolete rudimentary structure, and has its uses by pouring a secretion into the large bowel for promoting the digestion of food therein. Carnivorous animals do not possess a cæcum, but among herbivorous animals the organ is very large. Generally when obstructive appendicitis is threatened, a thorough washing-out of the breeding bed of the offending microbe in the cæcum, and appendix, by a copious injection of

warm water, will overcome the trouble, and will put the matter right pretty soon. Sir William MacEwen, of the Charing Cross Hospital, now teaches that the human appendix is also "the home of a troglodyte microbe that wages the fiercest war against undigested food."

Old persons bear a spare diet best, then adults; whereas youths tolerate it less easily, particularly children. In persons who are ill-nourished the tubercle bacillus seems to find a specially favourable soil; so that the association between bad feeding, and such diseases as lung consumption, and scrofula, is well established, while an improvement in nutrition is not infrequently followed by their cure. This is the probable reason why diabetic patients (who are kept too often in a chronic state of partial starvation) become so liable to tubercular disease of the lungs, or of some other organ; and why tall men who take only as much food as their fellows of lower stature, fall short of full health, and develop a tendency to consumption. Again, that "a hungry man is an angry man" has grown to be a recognized truth. On the other hand, the theory has been mooted, with no small show of reason, that persons with large appetites, and good digestions, who eat more of highly organized foods than they require, or can use up, are particularly prone to cancer. There is a natural tendency for healthy persons beyond middle age to consume more food than they actually need. Dr. Rabagliati, of Bradford, puts it among his *Aphorisms* that "'taking a cold,' as it is called, far more often depends on wrong feeding than on exposure to a chill, or than on climatic changes; whereby it follows that the best way for avoiding any such catarrhal attacks (often contracted more severely in hot weather than in winter, and yet no one speaks of them as 'taking heat,' their chilly shiver being then rather the first stage of feverishness) is not merely to wrap up well, but, as a more important point, to eat properly; certainly not more often than at three daily meals, indeed only at two by preference, and then not taking more than from twelve to twenty-four ounces of ordinary food, according to age, and occupation followed. If in six months, or so, the person still finds himself catching cold too readily, or too often, he should eat only in the morning and evening, taking moderate meals; and if again after another time of six months the same trouble persists, he should reduce the quantity of food to eight ounces at one meal, and four ounces at the other. Still

once again, if the disposition to cold-taking yet declares itself, then only one daily meal should be had, consisting of twelve, or sixteen ounces of appropriate food."

According to Villa Novus, hys prescription, "the use of meat in a morning is to be disallowed as gross, hebetant, feral, altogether fitter for wild beasts than men; *per contra*, he commendeth herb diete for this meal as gentle, humane, active, conducing to contemplation; breaking the fast on eggs, and cooling salades, mallows, winter cresses, and those herbes." Charles Lamb, in his essay on *Popular Fallacies*, insists that "when advanced in years a man should not take his chief meal in solitude, for it to be properly nutritive"; this he styles "the solemn ceremony of manducation." "There are," as *Health* maintains, "some happily-disposed individuals who can dine alone, and not eat too fast, nor too much, nor too little; but with the majority of persons it is different. Towards due and easy nutrition the food should be masticated slowly, and the mind not be intensely exercised during the process." Our forefathers took their meals seriously at times, inculcating such mannerisms as "Cease your chatter, and mind your platter," or "None but fools and fiddlers sing at their meat." We are certainly wiser in promoting social pleasantries at table, and in believing that "the chatted meal is half digested." Everyone knows that violent bodily exercise is bad just after a meal, and mental exertion is equally so. In fact, the experience of all past generations has perpetuated the lesson that a man should not eat alone, nor think deeply at the time of a meal, but should talk, and be talked to, while he feeds. Most persons do not ponder profoundly while they talk, and such light talking is a natural accompaniment to eating, and drinking; it needs no moralist to declare the evils of solitariness at meals. Most assuredly it is not good for man to eat and drink alone. Pleasantly, and gracefully enough, when a Russian dinner concludes, the hostess takes her stand at the table end, and the guests come up one by one to kiss her hand, while the children thank both father and mother for the good meal they have received. Milton wrote to the effect that "the interim of convenient rest before meat may both with profit, and delight be taken up in recreating, and composing the travailed spirits with the solemn, and divine Harmonies of musick, heard, or learned; the like also would not be unexpedient after meat, to assist, and cherish nature in her

first concoction." As to sleep after dinner, Dr. Chambers declares it retards digestion, and allows the distended stomach to act injuriously on the circulation of the brain. "It is proper only for very aged persons, or invalids, and not always for them." Concerning a "tea dinner," writes Ian Maclaren, "it is the most loathsome meal ever invented; and we'll never have it at the Free Manse. A certain number of tea dinners would make a man into a Plymouth Brother! it's merely a question of time."

Bouchard has shown that if food is retained in the stomach longer than for five hours, the changes which then take place therein are fermentative and putrefactive, rather than digestive. Flatulent discomfort occurs chiefly during the latter part of a slow, and over-burdened digestion, when the food mass has reached the large intestines, wherein it sluggishly ferments. When it enters the small intestines at first, certain residual bacteria preserve it from fermenting there; but further on in the larger bowels most of the liquids are absorbed, and the production of antiseptic acids ceases, so that putrefactive gases are generated therein, giving rise to distension, and to remorse for over-indulgence at table. The liver exercises a poison-destroying power by the bile, and the kidneys will eliminate intestinal microbes.

"Olim erat anxia anus, valde anxia; quid tibi visum est?
Potando tantum, tantum si pavit edendo!
Et quanquam potu vivebat plurima, et esu
Ipsa erat æternum fulmen, lis, jurgia, clamor."

"There was an old woman, and what do you think?
She lived upon nothing but victuals and drink:
And though victuals and drink were the chief of her diet,
Yet this restless old woman could never keep quiet."

MEATS.

ANIMAL food in the form of meat, or the flesh of ox, calf, sheep, lamb, pig, and other animals, consists mainly of muscular substance, proteid, meat juices, and fat, being the highest kind of sustaining nutriment for man. It may be taken sometimes raw, under special conditions of deficient health, but is almost always sent cooked to table, either roasted, boiled, broiled, baked, or stewed. Full particulars as to meat constituents, and the methods of preparing them, are to be found explained in *Kitchen Physic*. Great care should always be exercised as to the quality, and soundness of meats which are to be served, as well for persons in good robust health, as for the weakly, and

the convalescent. It must be remembered that flesh meat which shows the slightest sign of incipient decomposition is dangerous. Heat sufficient to destroy bacterial life never reaches the middle of large pieces of meat during their cooking; it penetrates only slowly into the interior of the flesh, and never reaches therein to the degree of 100° C.; so that, if present within the meat, most of such bacteria would probably survive the ordinary process of cooking, and in any case their spores would be certain to retain a dangerous vitality. If the juice which can be expressed from cooked meat is a turbid liquid, then it is likely that the temperature in cooking has not exceeded 56° C.; if it is of a clear red, then the temperature has probably risen to between 50° and 60° C., but not exceeding 65° C.; if up to 70° C. the colour of the meat juice changes to brownish red; and between 75° and 80° C. to yellow. With respect to cold meat, it must be noted that if, after being cooked, and become cold, it remains exposed to any injurious influence, such as dust, flies, or noxious smells, even within a few hours it will generate microbic bacilli in large numbers, which are prejudicial to health. Cold meat-jelly is used as a prolific germinator in every experimental laboratory; so that re-cooked, hot meat is always more wholesome, and a safer food, than cold cooked meat, unless quite recent, and absolutely fresh.

Broiled meat is less likely to contain microbes, or bacilli still living, than meat roasted in joints, because in these latter the heat about the middle of the roasted joint does not reach a degree destructive to the microbes; whereas within the thinner broiled meats it attains a considerably higher degree, such as will put an end to the micro-organisms. No animal parasite in meat can withstand a temperature of 70° C. as attained in ordinary cooking, which therefore renders it free from any such elements of infection; but this is not the case as regards the pathogenic bacteria of typhoid, or putrescence. "Planked" meat (and fish) are in this way made antiseptic, as well as very palatable. Baked food done on a suitable plank in the oven is essentially wholesome, and dainty. On Easter Sunday (1512), in the Bay of the Cross, U.S.A., the natives were found cooking fish upon logs with a fire upon the beach. Of course the plank must be of a proper sort, recent oak being capital for the purpose; it contains pyroligneous acid, which rises by the heat of baking. Also animal oil flows out of the meat, or fish, into the plank,

and meets the pyroligneous acid, so that each being hot, they chemically unite, and a gas is produced which permeates the meat, or fish, as it were "curing" the substance, and imbuing it with an appetizing taste, and relish. The food cooked in this way becomes immediately converted within the stomach and intestines into chyle, and is readily digested. By which plan oily fish which would be otherwise difficult of digestion, and would cause distress, also roast pork, and the like, become readily digestible; but of fish only the oily sorts can be planked in cooking, whilst nearly all kinds of meat are improved by the process.

Ordinary meat-gravy furnishes nearly 50 per cent of uric acid. During continued fever there is a rapid waste of nitrogenous elements of the bodily structures, such as would in health be best restored by lean meat, and proteids of a like sort. But under such conditions of illness these are not admissible, and "it is better," as Dr. Hutchison teaches, to give then the proteid-sparers, such as gelatin, the carbohydrates, and fats, than to encumber the body, and tire the digestive energies with any free supply of proteids themselves. "Milk should always form the basis of fever diet; about four pints in the day will generally be sufficient, either given plain, or diluted with some alkaline effervescing water. If seeming to be needed, one or two teaspoonfuls of milk sugar, dissolved in a little hot water, may be added to each tumblerful of the milk. Beef-tea, or simple broths, may also be allowed, about a pint a day, except when diarrhœa is present." No patient with chronic kidney disease should make use as food of beef-tea, or bouillon, or the so-called beef extracts. These substances are concentrated solutions of salts identically the same as those which go to form the urine itself, in addition to some albumin; whereby the kidneys are already overworked, seeing that the blood is surcharged with these toxic products. A milk diet will be the proper course to adopt, diluted or skim milk being preferred, wherein the proportion of helpful proteid remains undiminished, and the harmless fat is retained.

Stewing is in many respects the ideal method for cooking meat: it coagulates the proteids without hardening the fibrous tissues. As concerning these proteids (superlative sustenance for restoring nervous power, and repairing muscular loss of substance) lean beef contains, roughly speaking, twice as much as wheat flour; but beef is about four times as dear as flour;

therefore one may estimate that proteids from the animal source are quite twice as costly as proteids from the vegetable source, only there are additional stimulating, and cordial principles in the former, which are lacking in the latter. When the proteid of meat is swallowed, and reaches the stomach, then this animal food is converted by the gastric juice into peptones, as the first stage of digestion. Now the same early digestive process can be artificially brought about beforehand, outside the body, prior to eating the meat ; and it is contended that in such a way the stomach is saved efforts which can be then utilized for the later stages of digestion. But one may fairly ask, Are the artificial peptones of as much dietetic value as the proteid meat at first hand ? Are they equally well assimilated, and as capable of recruiting the invalid ? We may confidently say that they *can* fully play the part in nutrition, which is ordinarily taken by proteids given unaltered, and swallowed as food in the customary manner. But it may not be denied that these outside peptones have a tendency to produce diarrhœa, since they seem to cause a considerable flow of water from the blood into the stomach and bowels, leading to looseness. When treating fevers, and wishing to give proteids, it is found that milk albumin (or Plasmon) will nourish, without raising the bodily temperature as flesh meat does. Plasmon contains about 90 per cent of milk-albumin.

Charles Lamb, a good judge of meat, compared thereto his own literary productions ; and when a contributor to *The Champion* (1814) begged the editor, Mr. Scott, to " wink occasionally at briskets, and veiny pieces." As a rule the flesh of a female animal is more tender, but with less flavour, than that of the male. It was Jeremy Taylor's hen-pecked husband who " found dry bread abroad better eating than roast meat at home."

Mutton is the flesh of sheep (*Multo,* originally a ram deprived of its horns). " The Moton boyled is of nature, and complexion sanguyne, the whiche to my jugement is holsome for your Grace " (*Babee's Book*). A leg of Mutton for roasting may be hung until tender, and perhaps even a little high-smelling on the outside, because the action of the fire will brown, or carbonize it, making it sweet by the antiseptic brown caramel which is produced all over the outside of the roasted joint. But a leg of Mutton to be boiled must be perfectly fresh, seeing that no carbonizing of its outside is then effected, with antiseptic anti-putrescent

results. Dr. King Chambers has pronounced that a leg of Mutton is "the promised land to a convalescent patient." Sheep thrive best in Scotland, and Mutton is such a constant dietetic resource there, that Scotch broth always means Scotch Mutton-broth. This Mutton is naturally accompanied therein with Scotch barley, and with turnips, upon which the sheep have mainly to live, and from which they partly derive the flavour of their flesh. Bread may be added in broken pieces, or in fried croutons of toast, pouring the hot liquid over the prepared bread in the soup tureen (*Soupe au pain* of the French). The *Gigot à sept heures*, or *Gigot la cuillère*, is in France a leg of Mutton which has been cooked for several hours, when it may be carved with a spoon. Charles Dickens loved "a little supper, and a glass of something hot," his favourite dish at that meal being a leg of Mutton boned, and stuffed with veal stuffing, and oysters. For the accompanying punch he had a special recipe of his own invention. There is a notable recipe for a similarly seasoned dish in the *Fairfax MSS.* of three hundred years ago "as to the roasting of a shoulder of Mutton with a stuffing of oysters, eggs, and sweet herbs mixed with white wine vinegar." Dr. Kitchener, famous as author of *The Cook's Oracle*, invited Pope, the well-known actor, to dinner, thus raising the highest expectations of this gourmet; but the Doctor only gave him a roast leg of Mutton with boiled potatoes; and Pope to the end of his days denounced him as "an infernal impostor." A stock dish of honour at a Boer table, (being placed in the centre of it), in the Transvaal, is boiled salt Mutton. A leg of Mutton which has first been salted, then soaked in water, and next coated with a paste made of mealie meal, is afterwards put into the oven for a short time to harden the covering; it is then taken out, and boiled, and proves very appetizing. At the commencement of the eighteenth century Mutton pies were much in popular esteem, being sold commonly in the streets as "All hot! all hot!" Dr. Wharton, Professor of Poetry at the Oxford University, wrote an advertisement for promoting the sale of these commodities :—

"All ye who love what's nice, and rarish
At Oxford, in Saint Martin's Parish,
Ben Tyrrell, cook of high renown
To please the palates of the gown,
At threepence each makes mutton pies,
Which now he hopes to advertise.

He welcomes all his friends at seven
Each Saturday, and Wednesday even ;
No relicks stale with art unjust
Lurk in disguise beneath his crust :
His pies, to give you all fair play,
Smoke only when 'tis market day :
If rumps and kidneys can allure you,
Ben takes upon him to assure you,
No cook shall better hit the taste
In giving life and soul to paste :
If cheap and good have weight with men,
Come all ye youths, and sup with Ben."

In some of the Northern Islands, which are particularly noted for the excellence of their Mutton, it is said that the peculiar flavour of the meat is due to the fact that the sheep occasionally regale themselves upon seaweed.

One ounce of Mutton flesh contains eighty-six grains of proteid; a thin Mutton chop contains forty-one grains. At the Red Queen's dinner (in *Alice through the Looking Glass*) her Majesty ordered, "Put on the joint!" and the waiters set a leg of Mutton before Alice, who looked at it rather anxiously, as she had never been made to carve a joint before. "You look a little shy," said the Red Queen; "let me introduce you to that leg of Mutton. Alice! Mutton!—Mutton! Alice!" The leg of Mutton got up in the dish, and made a little bow to Alice, and Alice returned the bow, not knowing whether to be frightened, or amused. "May I give you a slice?" she said, taking up the knife and fork, and looking from one Queen to the other. "Certainly not," said the Red Queen very decidedly; "it isn't etiquette to cut anyone you've been introduced to!" "Remove the joint!" And the waiters carried it off, and brought a large plum-pudding in its place. Among *Secrets in Physic and Chirurgery* (1653) it is ordered as specially restorative "to take a young leg of Mutton; cut off the skin, and the fat; take the flesh, being cut into small pieces, and put it into a stone bottle; then put to it two ounces of raisins of the sun (stoned), a large mace, an ounce and a half of sugar-candy, and stop the bottle very close, and let it boil in a chafer three houres; and so put the juice from the meat, and keep it in a clean glasse; it will serve for three breakfastes, or, if he will, he may take some at three a'clock in the afternoon, being made warm" (Right Honourable the Countesse of Kent, late deceased).

At the "Boiled leg of Mutton Swarry" held by the fashionable footmen in Bath (*Pickwick*), Mr. Whiffers, the gentleman in orange, (who was giving up his situation in service) "could have wished to spare the company then before him the painful and disgusting details on which he was about to enter, but he had no alternative other than to state that he had been required to eat cold meat."—"Try a subtraction sum," says the Red Queen to Alice (*Through the Looking Glass*); "take a bone from a dog: what remains?" Charles Lamb has told (in *Grace before Meat*), "A man may feel thankful, heartily thankful, over a dish of plain Mutton with turnips, and have leisure to reflect upon the ordinance, and institution of eating, when he shall confess a perturbation of mind, inconsistent with the purposes of a Grace before Meat, at the presence of venison, or turtle. I have always admired the silent Grace of the Quakers, who go about their business of every description with more calmness than we, with applications to meat and drink less passionate and sensual than ours. They are neither gluttons, nor wine-bibbers as a people; they eat as a horse bolts his chopped hay, with indifference, calmness, and cleanly circumstances; they neither grease, nor slop themselves."

Mutton fat has a strong characteristic odour, and turns rancid more readily than beef fat. In South Africa the tail of the native Cape sheep, (which tail is composed entirely of fat, and often weighs five or six pounds), when minced, and melted out, supplies the Cape housewife with a very good substitute for lard; this is excellent for frying fish, or fritters in, is more delicate than lard, and when eaten on hot toast, with pepper and salt, is a good imitation of beef marrow. Our forefathers thought the person served to begin with from a leg of Mutton badly off. "The cut that is worst of a leg is the first," said they. George A. Sala, telling in his *Thorough Good Cook* (1895) about Mutton-chops, commends one "so judiciously broiled as to be thoroughly done through, but not to exhaust its gravy, as an incomparably good lunch for a busy person up to the age of fifty; with the addition of a mite of minced shallot, for gentlemen only, Worcester sauce being too potent an accompaniment, and interfering with the hot chop's balminess of flavour; whilst a large, well-boiled, mealy potato goes well together with a chop having a curly tail." Sydney Smith, in a letter from Green Street, London, W. (1839), says: "I will give you very good Mutton

chops for luncheon, seasoned with affectionate regard, and respect." In the *Art of Cookery* long before, we read that a certain

> " Old Cross condemns all persons to be Fops
> That can't regale themselves on Mutton Chops :
> Sometimes ' Poor Jack ' and onions are his dish,
> And then he saints all those that smell of fish."

George Eliot, writing to Charles Bray from Broadstairs (July, 1852), told him : " I am profiting, body and mind, from quiet walks, and talks with nature, picking up shells (not in the Newtonian sense, but literally), reading Aristotle, to find out what is the chief good, and eating Mutton-chops that I may have the strength to pursue it."

Lamb, or young sheep, when sold as " Easter grass lamb," is, as says Dr. Kitchener, " young, tough, stringy Mutton, which had better be called ' hay Mutton.' House lamb might be in season from Christmas to Ladyday, grass lamb from Easter to Michaelmas, but *sham lamb* is independent of the season. A quarter of a porkling is sometimes skinned, cut, and dressed, lamb-fashion, and being thus lambified is sold as a substitute. " Lamb, like all other young meat, ought to be thoroughly done ; therefore do not take either lamb, or veal, from the spit or jack, till you see it drop white gravy ; this rule is of great importance for the preservation of health." Crabbe, in *The Borough*, has written with apt alliteration about thyme-fed Mutton grazing among

> " The sandy sheep-walk's slender grass,
> Where fragrant flowers among the gorse are spread,
> And the lamb browses by the linnet's bed."

The sweetbread of the lamb, smaller than that of the calf, is often substituted for the latter. Charles Lamb has told in *Rosamund Gray*, that " ' green peas, and a sweetbread ' were a favourite dish with him in his childhood, he was allowed to have it on his birth-days." Compared with other foods as to its digestibility by the gastric juice, lambs' flesh ranks below mutton, and veal, or salmon, but higher than poultry, whilst containing double as much fat as that of the calf. Horace, the Roman poet, invited Phyllis, the last of his loves, to " a banquet of lamb, flanked by old wine, parsley from the garden for the weaving of festive chaplets, and ivy to bind her hair." " Lamb-tail pie " is " a dainty dish to set before a king."

Pork, the flesh of the hog, has already received some particular consideration here as *Bacon*, which is this flesh when cured for keeping. "Corned" Pork was an abbreviation of acorned Pork, the animal having been fed upon acorns, such as were the chief support of the large herds of swine on which our first British forefathers subsisted. Acorns, when roasted, and ground, can be employed as a fair substitute for coffee. By distillation they will yield an ardent spirit. The Acorn contains chemically starch, a fixed oil, citric acid, uncrystallizable sugar, and a special sugar known as *quercit*. It is worth serious notice medically, that in years remarkable for abundance of acorns, very disastrous losses have occurred among young cattle in oak forests, or if fed on the oak produce, through outbreaks of acorn poisoning, or the acorn disease; the symptoms were wasting, loss of appetite, diarrhœa, discharge from nose, and eyes, and sores within the mouth. As regards cookery, the primitive ages were those of "innocence, and acorns." "Thef weren wont lyghtly to slaken hir hunger at euene with acornes of Okes" (Chaucer). In Jane Austen's capital domestic novel, *Emma*, the fidgety *malade imaginaire*, old Mr. Woodhouse, when a home-fed little porker had just been slaughtered for his household, instructed his daughter to the effect that certainly the pork was small, and delicate; but unless they could "make sure of the loin being made into steaks, nicely fried, without the smallest grease, and not roasted (for no stomach can bear roast Pork), we had better," said he to his daughter, "send the leg away to our neighbour, Mrs. Bates; don't you think so, my dear?" Galen, of old, prescribed Pork as a good food for persons who worked hard; and not a few modern physicians maintain that it is the most easily digested of all meats. "Certainly it is more readily digested," says the *Epicure* (January, 1904), "than that respectable impostor, the boiled chicken, which so cruelly defies the feeble powers of an invalid."

Veal is the flesh of a young calf (*Vitellus*), of which the skin is made into vellum. It contains much less iron, and alkali salts, than beef, but is, on the other hand, richer in connective tissue. This flesh affords 19 per cent of proteids, that of the ox 20 per cent, and that of the sheep 17 per cent. "Weal pie," said Sam Weller, soliloquizing (at the shooting party in *Pickwick*), "is a wery good thing when you know the lady as made it, and is quite sure it ain't kittens." "I lodged in the same house

with a pieman once, Sir, and a wery nice man he were: regular clever chap, too! make pies out of anything, he could! 'What a number of cats you keep, Mr. Brooks,' says I, when I got intimate with him. 'Ah,' says he, 'I do, a good many,' says he. 'You must be wery fond of cats,' says I. 'Other people is,' says he, winking at me. 'They aint in season, though, till the winter,' says he. 'Not in season?' says I. 'No,' says he; fruits is in, cats is out.' 'Why, what do you mean?' says I. 'Mean?' says he. 'Mr. Weller,' says he, a squeezing my hand very hard, and vispering in my ear, 'don't mention this 'ere again, but it's the seasonin' as does it; they're all made of them noble animals,' says he, a pointin' to a wery nice little tabby kitten; 'and I seasons 'em for beefsteak, weal, or kidney, 'cording to the demand; and, more than that,' says he, 'I can make a weal a beefsteak, or a beefsteak a kidney, or any one on 'em a mutton, at a minute's notice, just as the market changes, and appetites vary.'" Veal, though not of an exciting nature, is nevertheless difficult to be digested by most persons, and should not be permitted in complaints of the stomach. At the same time it is the most delicate in flavour of all meats, though sometimes provoking nettlerash, or other outbreaks on the skin. In *The Newcomes* (Thackeray) we read of "the famous Veal cutlets which Miss Martha Honeyman used to prepare with her own hands, to be offered on the shrine of Colonel Newcome when he posted down from London to pay her a flying visit." Again, Lear relates in his *Book of Nonsense*:—

> "There was an old man of Three Bridges,
> Whose mind was distracted by midges;
> He sat on a wheel, eating underdone veal,
> Which relieved that old man of Three Bridges."

On January 1st, 1661, Pepys "supped with Mr. Pierce, the purser, and his wife, and mine, where we had a calf's head carboned, but it was raw: we could not eat it; and a good hen. But she is such a slut that I do not love her victuals." Lemon-juice, and a stuffing of herbs, aid the digestion of Veal. "Good Veal stuffing!—reflect!—is in itself a triumph of culinary instinct; so bland is it, and yet so powerful upon the gastric juices! Did I call Veal insipid? But it is only so in comparison with *English* beef, and mutton. When I think of the 'brown' on the edge of a cut of really fine Veal!" (Henry Ryecroft).

Ignotus, the physician, has commended Veal broth *maigre*

for persons who habitually indulge in rich soups, and highly-spiced dishes, so as to give their digestive organs an occasional rest. "Stew a knuckle of Veal in about a gallon of water, to which put two ounces of rice, or vermicelli, with a little salt, and a blade of mace; when the meat has become thoroughly boiled, and the liquid reduced to one half, it may be sent to table, with, or without the meat." Voltaire advised his friend Lambert to St. Cirey, where Veal gravy broth was to the fore in everything. "We are going," said he, "to live a hundred years." The recipe for this "*Blond de veau*" had been given by the famous Tronchin, whose system of hygiene was to "keep your head cool, your feet warm, and your bowels open." Sydney Smith, writing from London to Mrs. Maynell (1841), told her "he had been living for three days on waiters, and Veal cutlets." Mr. Ben Allen and Mr. Bob Sawyer (in *Pickwick*) sat together in the little surgery behind the shop "discussing minced Veal, and future prospects." A delicious, and very nourishing Veal cream is to be made, of which a small quantity may be eaten occasionally by delicate invalids, in alternation with other light foods. Bruise half a pound of lean fillet of Veal in a mortar, and when it is reduced to a pulp, pass it through a fine sieve, together with an ounce and a half of pearl barley which has been previously soaked in cold water for several hours; dissolve half an ounce of Russian isinglass in two gills of thick cream, and bring the whole to the boil, adding salt to the taste, and flavouring with an infusion of mixed herbs; pour into a wetted mould to set, and turn out into a glass dish, or plate, and garnish with sprays of parsley.

The true Sweetbread of a calf, from its throat-front, renews defective growth in children by reason of its constituent earth-salts, as described elsewhere; whilst the stomach-bread, or pan-creas (often substituted by butchers in lieu of the sweetbread), serves to augment the supply of natural fats, for warmth, and for growth of the adipose structures. The true (throat) sweetbread contributes organic phosphorus, which goes to repair and recruit the nervous system when feeble, and impoverished. A lamb's sweetbread, or throat-gland, is likewise beneficial as a general restorative in suitable cases. Similarly, even in its uncooked state the calf's stomach-bread (pancreas) exercises by its juices powerful digestive effects on flesh, milk, starch, and kindred substances. But this property becomes destroyed by boiling; so that the

so-called sweetbread, when cooked, is to be eaten by the invalid, not as producing any digestive effect, but rather on account of its delicate flavour, and its invariable tenderness. In France each sweetbread, whether from calf, cow, or ox, is called "*Ris de veau,*" the word "*ris*" signifying laughter. "Betr than olde Boef is the tendre Veal" (Chaucer, *Merchant's Tale*).

Pepys, in his famous *Diary*, records it that on October 24th, 1662, he "dined with my wife upon a most excellent dish of Tripes of my own directing, covered with mustard, as I have heretofore seen them done at my Lord Crewe's, of which I made a very great meal, and sent for a glass of wine for myself." Tripe is the paunch of the stomach of cud-chewing animals, the ox, cow, etc.; its principal constituents are albumin, and fibrin, with fat; it is the most easily digested of all viands, possessing a large amount of connective tissue, which is readily changed into gelatine on boiling, so that the fibres are easily acted on by the gastric juice of the stomach. It also contains fat in a considerable amount, but not diffused through the muscular part. Unfortunately, the lack of extractives causes Tripe to be somewhat deficient in flavour, but otherwise it is to be regarded as a valuable, easily-assimilated food. About forty grains of proteid are present in each ounce of Tripe. Dr. Kitchener thought that Tripe holds the same rank amongst solids that water-gruel does among soups. It is without doubt tasteless of itself; and if the non-striped muscular fibres comprising its substance (such being the rumen, or first stomach of the ox) did own any little savoury material, this must be lost in the difficult process of its preparation, and boiling. The Tripe remains, therefore, chiefly a body of connective tissue, and has to be boiled until it is almost ready to dissolve into gelatine. It should be bought at the Tripe-shop in the boiled state, and next re-boiled at home in milk for at least an hour; and must then be made tasty by sauces, or garnishes, being therefore most frequently flavoured with an abundance of onions. According to Homer, Tripe was one of the dishes presented to the guests at the feast of Achilles as a food fit for heroes. A French name for Tripe is *Gras double.* Our English word is derived from "*Trippa,*" entrails, belly, strippen. There is the plain Tripe, and the reticulum, or honeycomb Tripe, including the whole of the cardiac division of the stomach; this latter is the best part. The *Art of Cookery* (1709) suggests keeping the culinary preparation of Tripe out

of observation by those who are to partake of it when dressed, and sent to table :—

> "In private draw your poultry, clean your tripe,
> (And from your eels the slimy substance wipe.)
> Let noisome offices be done by night,
> For they who like the meat abhor the sight."

Mr. Lawson Tait, the late eminent surgeon, constantly recommended Tripe to his convalescent patients, with the remark that if it cost a guinea a pound, everyone would be wanting to eat it. Great care must be taken to always thoroughly clean it, and then to boil it steadily until quite tender; if fried it is not so digestible. Other ways of cooking it are as minced, stewed, curried, grilled, or fricasseed; but for invalids it is best boiled, and served with onion sauce, simply and smoothly made. Further particulars about Tripe, its cooking, and its literary associations, are given in *Kitchen Physic*. Five days before Charles Lamb was overtaken by erysipelas ensuing after a slight accident, and soon becoming unexpectedly fatal, he enquired anxiously from Mrs. Dyer about a book left at her house, which he had gone out to fetch "while the Tripe was frying." "It was Mr. Cary's book, and I would not lose it for the world," said Lamb; "if it be lost I shall never like Tripe again." The book was afterwards found, with a leaf folded down at the account of Sir Philip Sydney's end.

As regards animal foods in general, raw meat juice is deemed by some doctors to be the most highly restorative, and the most readily digested of all such foods, being particularly valuable for supplying proteid to children. When mixed with milk, it is usefully antiscorbutic, though needing to be prepared fresh every day, as it does not keep well. This contains 5 per cent of albuminates, and 3 per cent of nitrogenous extractives, together with mineral salts. Add to finely-minced rump steak, cold water in the proportion of one pint of water to four parts of the meat; stir well together, and allow to stand for half an hour; then forcibly express the juice by squeezing it out through muslin. But Dr. Hutchison is of a different opinion as regards raw beef-juice, which "cannot be considered an important aid to nutrition; this being evident from the fact that even of a preparation which contains 5 per cent of proteid, about three pints would be needed to supply the proteid required by an invalid; so that these raw meat juices can only be of some

slight service in tiding over a crisis in which the administration of milk is for some reason out of the question. But a solution of egg-white flavoured with meat-extract makes an efficient substitute for beef-juices. The nutritive value of Beef-tea, which of itself never contains more than 2 per cent of nutritive matters, can be materially increased by adding to it the finely-powdered fibre of the meat; and the only means for getting the full nutritive value of meat in a small bulk is by the use of meat powders, thereby making 'whole beef-tea.'" Extract of meat is prepared by simply mincing lean fresh meat, and exposing it to the action of cold water, afterwards evaporating down the solution to the consistence of a thick extract. But without its flavouring constituents (which are likewise to be secured, as in Liebig's Extract), and the other nutritive attributes of the flesh, animal food is tasteless, and almost worthless. "It is upon the extractives," writes Dr. Hutchison, "that the value, and uses of Liebig's meat-extract must chiefly depend; these have unquestionably a marked effect on the digestive organs; they are the most powerful exciters of gastric digestion that we possess, and are thus eminently calculated to rouse the appetite, and aid the digestion of any food with which they may be taken. This, indeed, is their true *rôle*, both in health, and in disease: they are *flavouring agents*, and their proper place is in the kitchen, not by the bedside. But as regards nourishing an invalid, these substances represent only the fragments, as it were, of broken-down proteid, and are of no use as tissue-builders."

An admirable combination of animal proteids with some useful carbohydrates is meal-bread, or wheaten bread, together with which a quantity of freshly-cooked, and minced, lean meat has been incorporated, after such a manner that it cannot be seen in the loaf, being completely dissolved in the crumb. Fresh dough will thus assimilate an amount of the meat corresponding to one pound within two pounds of the flour. It will really dissolve considerably more, up to one pound of meat to the dough of one pound of flour, but then the bread would not be so good. This bread is darker in colour than a white wheaten loaf, though having a white crust, an excellent taste, and being highly nutritious. It constitutes, indeed, with a certain amount of fat, a perfect food, and can be assimilated with ready ease by persons labouring under difficulties of the digestive organs.

It is to be leavened by under half an ounce of compressed yeast to the pound of flour. Ordinary bread contains proteid, and carbohydrate matters, also fat, in a very small quantity; so that meat and bread in combination afford the essentials of a healthy diet.

The best way of preparing raw meat (a form of food which patients with very weak stomachs can digest more easily than most other sorts of nourishment) is to scrape a piece of tender, juicy steak with a blunt instrument, in a direction parallel to the course of the fibres, which are thereby separated out from the connective tissue including them, the same being left behind. The fibres form a pulp, which may be seasoned with celery-salt, and a little pepper, being then served either in a sandwich between thin slices of bread, or stirred into broth.

Certain acids become developed in meat by hanging, which improve its flavour, rendering it less insipid of taste than when fresh. Thus the flesh of hunted animals (wherein the same acids become immediately created by reason of the extreme muscular exertion undergone straightway before death) is of superior flavour. Another method for producing the same effect artificially is by soaking the meat in vinegar and water for a short time before cooking it, thereby giving to fresh meat a better taste, and making it more tender. Nevertheless, the flesh of an animal which has been slaughtered for food dies only by degrees as to its tissues and cells, which continue for a while to consume the food elements with which they are still remaining in contact; and various toxic substances are resultant, which now accumulate, since no longer do the skin, lungs, and kidneys, or bowels operate to carry off these poisonous excretions, whilst the dead animal contains no aerated, or purified blood, only the venous fluid with its retained urea, and other such effete matters of broken-down structures. To a varying extent this must be the condition of all the meat which comes into the market for animal food. We can imagine how aggravated is the evil when the carcase has been kept for several days, or weeks. Certain savage tribes poison their arrows by sticking the points into the flesh of such decomposing animals. "It must be admitted," says Dr. Haig, "as by no means improbable that the existence within a person's body, accustomed to the consumption of animal food, of semi-organized material in excess of what is required for maintenance,

and repair of tissue, might tend to the development of a morbid structure taking the form of malignant cancerous growth." But, *per contra* Dr. Sykes, having practised medicine for several years in China, tells (March, 1902) : "That because of poverty the consumption of meat there is limited among the people in general ; but, nevertheless, cancer prevails of various forms, though chiefly as scirrhus of the breast-gland."

As to the alleged increase of cancer during recent years, because of the large amount of animal food consumed in this country, especially by the working classes, the reply may be made that it is just among these very working classes that cancer has not increased. According to the medical statistics of the eighteenth, and early part of the nineteenth centuries it is found that these were times of great meat eating, and excesses in drinking, by the upper and middle classes, whose gluttony then lay particularly in the consumption of solid meat. Dr. Oldfield protests that flesh eating *per se* is not a cause of cancer ; but that evidence goes to prove it is over-feeding the animals from which the meat is obtained, which makes such meat injurious in the direction at issue. And this comes about by retention of the products of decomposition remaining within the animal tissues, which produce in the eaters thereof an "unstable cell equilibrium." He found that in India cancer was practically non-existent in all those areas where the vegetation was sparse, and where the animals killed for food had been constrained to live hardly ; whilst the disease was more prevalent where the vegetation was ranker, and where the animals used for food were more highly foddered.

Again, with respect to pulmonary consumption, the Jews in this country are known to have a remarkable freedom therefrom, their percentage of deaths in London from this disease being less than half that found among the general population. Probably the rigid inspection exercised over the meat supplied to the Jews has (together with other hygienic observances) much to do with this immunity. Moreover, the animal organ within the carcase of beasts slaughtered for their market, which is most diligently overhauled, and most severely tested, is the lung. "Warts" in the lung create a suspicion of tuberculosis ; and any induration, or any presence of purulent matter in, or about such "warts" (or "grapes"), or the smallest amount of pleuritic adhesion, is sufficient to cause rejection of the meat.

With regard to the Kosher meat of the Jews, to make sure of the knife used for slaughtering these animals being without flaw as to its edge (so as to minimize the pain felt by the beast) it is examined four or five times a week, sometimes even daily; and one of the most curious spectacles of the slaughter-house is that of the grave and reverend Signors (who are named Dayanim, or Judges) passing a searching eye over the knives, and over the general arrangements, to see that they are perfect. If everything is not religiously correct, the butcher officials may expect to be suspended. The beast is cast to the ground, and its throat being then cut it bleeds to death. Finally the leaden seal, with the word "Kosher" imprinted on it, is affixed to the carcase, signifying that the meat may be eaten by orthodox Jewry. The whole process takes about four and a half minutes to execute.

Englishmen from the time of the middle ages, have always held the reputation of being the fiercest fighters, because of eating so much meat. But a penalty is paid by thus brutalizing the man at the expense of his higher intellectual faculties. Robert Louis Stevenson has exemplified this danger in his wonderful story of Dr. Jekyll and Mr. Hyde, twin characters strangely opposite, but combined in the same individual, with adverse displays at different times; as already told about in detail (*see page* 45).

Respecting Bones, "their utility for alimentation was discovered by the dog," said Cadet Devaux (1803), who imitated that animal by breaking up, comminuting, and moistening the bones of edible animals. He proved to his satisfaction that bones are nutritive, by allowing to dogs the choice between soup, and bones, when the animals chose the bones, and left the soup. M. Devaux pulverized bones, and called his method the "Solution of the Gordian knot," and the "Egg of Columbus." "But," said Chevreul (1870), "no person of sound sense and taste would consent to drink the *bouillon d'os*."

With respect to the much extolled forms of highly compressed meals in lozenge, or tabloid form, now offered to the public, so that they who run may eat without the delay of sitting down to a time-wasting meal, or so that extra supplies may be carried in the pocket, "there are distinct limits" (says Dr. Hutchison) "beyond which the concentration of food cannot be carried; and the idea that food tablets may be prepared one or two of which would be the equivalent of an ordinary meal, is found to

be an impossible dream ; at the most all that can be done is to drive off the water which the food contains in excess, and even then most of it must be returned to the food before it can be eaten." (*See* LOZENGES, p. 437).

MEDLAR, (*See* FRUITS).

MILK.

THERE are ruminant, human, asinine, and equine varieties of Milk, all available for our sustenance, and curative uses. The essential difference between human milk, and that of ruminant animals (cow, goat, and sheep) lies in the character of their casein, or curd, and its proportions to those of the other albumins. The milks of all mammals consist of water, holding, in virtual or actual solution, salts, sugar, casein, and other albumins, with minute globules of fat uniformly suspended in the liquid, but tending to come to the top by reason of their lower specific gravity. Milk shares with oysters the advantage of containing within itself representatives of all three nutritive main divisions of food, the proteids, the carbohydrates, and the fats. But because milk is the pattern natural food of the human species, and of mammals, during the whole period of their most rapid young growth, it must not therefore be taken as a model diet for adults. This is evident from the fact that grass is the superlative food for the cow, by instinct, and milk that of the calf.

Human milk is always alkaline, cows' milk being either alkaline or acid, whilst that of carnivorous animals is acid. Cow's milk contains a little carbonate of sodium, and if a small quantity of acid be added thereto (for instance lemon juice or vinegar), some carbonic acid gas is given off, the sugar of milk being converted into lactic acid, so that then the milk does not go sour. Milk sugar is chemically lactose. Sydney Smith writing (1820) to Mrs. Meynell about the nurture of her infant son, said, "The usual establishment for an eldest landed baby is two wet nurses, two dry ditto, two aunts, two physicians, two apothecaries, three female friends of the family, unmarried, advanced in life ; and often in the nursery one clergyman, six flatterers, and a grandpapa. Less than this would not be decent." During the growing time of youth, the preponderance of nitrogenous matters present in milk makes it a most useful food ; but in

adult life this is not desirable. Yet, among *Modern Methuselahs* (Bailey), more than one centenarian is told about, who by eating but little substantial food, and only drinking milk, reached the great age of one hundred and thirty-eight years, whilst no hearty meat-eater has got beyond one hundred and three years.

The casein, or curd of these milks, is an albumin, but distinguished from other albumins by becoming coagulated when swallowed, through the action on it of the gastric juice, but not by heat when cooked, as the albumin (or white) of egg does. And the casein of one animal differs from that of another. This is the chief proteid, or nitrogenous constituent of milk, not coagulating spontaneously, as the fibrin, or albumin, of blood does, but by the action of acids, and of rennet. The casein of milk yields no uric acid, and does not contain any nuclein, which fact renders it specially of service for goutily disposed persons as a food; and it yields no carbohydrate when split up, which may render it of particular value in those severe cases of diabetes in which sugar is formed out of proteid foods. Curdling of milk depends on the production of lactic acid in the milk, which turns the curd, or casein, out of its partnership with the lime salts; then the casein, not being soluble, falls down as a flocculent precipitate, or clot. Lactic acid is formed in sour milk, this being, when concentrated by the chemist, a syrupy, intensely sour liquid, comprising well-defined salts. (It is produced likewise in the fermentation of several vegetable juices, and during the putrescence of some animal matters). Nevertheless, milk is the most powerful preventive of acidity, or neutralizer of acid, among all foods, chiefly by its citrate of lime, the basis of which is identical with that of lemon-juice; for a good cow yields practically as much citric acid in a day, as would be contained in two or three lemons. This citrate of lime, as occurring in new unboiled milk, is altogether devoid of any sour taste.

The solid particles sometimes met with in Condensed Milk consist chiefly of this citrate of lime. The great majority of condensed milks are sweetened by the addition of cane sugar (indigestible by an infant) in considerable quantity, so as to preserve them unchanged after the cans have been opened. Children fed on condensed milk get their teeth late, and are likely to be rickety; they become plump, but paddy; large, but not strong, lacking the power of endurance, and of resistance to disease. The condensed milk, when used for emergencies,

or in travelling, should always be diluted with at least ten times its bulk of water. In rickets, any excess of milk is to be avoided in the child's food, or aught else of the animal sort which causes stinking stools. The added cane-sugar prevents condensed milk from approaching the standard of human milk.

When milk enters the stomach, it sets into a solid clot, owing to the action on it, not at first of gastric juice, but of rennin; whilst the alkaline salts of the milk serve for a short time to partly neutralize the strong acid of the gastric juice, thus giving the rennin time to act, just as in making a junket with calf's rennet by the cook. Boiled milk clots more slowly outside the body than raw milk does, and with a less dense clot; but this is not the case within the stomach, as is often supposed by mistake, because the gastric juice redissolves the lime salts of the boiled milk, which then clots quite as firmly as does unboiled milk within the stomach. The change which takes place when milk turns sour by keeping, or in thundery weather, is caused by the growth in it of micro-organisms, which can be killed by heat (short of boiling). These micro-organisms are most active in milk at blood-heat, but scarcely at all in milk at 60° Fahr., and quite inactive at the freezing point. After being boiled, milk is free for a time from micro-organisms, but it will not remain so unless straightway sealed hermetically from the air, so as to prevent the entrance of fresh germs, which would shortly become very active therein.

When milk is allowed to remain exposed to the air in a cool place, the "bonny clobber," or sour milk, is produced in this wise. Some clot or cream collects on the top, and a mycelium, or membrane of delicate fungi, also forms on the uppermost surface of the milk, which now acquires an acidulous taste, and is sometimes a little effervescent, whilst curdling in the same way as it would by rennet; though this present curdling is caused by lactic acid, developed from the sugar of milk by a living low fungus and ferment termed the "bacillus of sour milk." Although generally rejected, yet sour milk is an agreeable, nutritious fluid, easily digested. It should be well stirred before use, and perhaps have some cream added; the taste can be heightened by white sugar and powdered cinnamon, with dice of bread, or bread crumb, to give it body. Lactic acid, when neutralized with an alkali, such as carbonate of soda, makes a useful hypnotic for sleepless patients with nervous

indigestion. To a tumblerful of curds, and whey, add a teaspoonful of carbonate of soda in powder, or enough to neutralize the acid. Sweeten to the taste, and add a grating of nutmeg, if liked. This is best when taken hot at bedtime. It is likewise helpful against the sleeplessness of Bright's disease (of the kidneys), or albuminuria. Again, a tumblerful of new milk with a tablespoonful of sound old rum mixed in it, and sweetening the draught if wished, will often answer the sustaining purpose of cod-liver oil as an early morning dose, whilst far more palatable and stomachic. Still nicer food is the delicate sweetmeat which is called "junket," (being actually a cream cheese which bears this name, because brought in or served on rushes, *giunca*, a rush), as curds mixed with cream, sweetened, and spiced, exquisite food for the little people. Thus Milton relates in his beautiful *L'Allegro*:—

> "With stories told of many a feat
> How faery Mab the junkets eat."

A mixture of milk and eggs, especially if sugar is added, inevitably curdles if heated to a high temperature, when the clear liquid which escapes is whey, and not merely water. This liquid may be given as a nutritious and safe drink in typhoid fever, as well as milk diluted with barley water, or butter milk, or the *eau albumineuse* (unboiled white of egg mixed with cold water). During convalescence the best beverage is toast-water.

In new milk, by churning, the oil globules which have already risen to the surface through standing (and which consist mainly of fat, mixed with some curd, and retaining some whey) unite to form BUTTER; whilst the liquid residue is butter-milk, which is essentially a solution of milk sugar, with the mineral salts, principally phosphates, retained therein, also some wandering butter elements. "Those persons," says Professor Koch admonitorily, "who are nervous lest the milk they drink should contain elements of typhoid fever, or other mischief, should remember that these bacilli may just as probably lurk in the butter, (which cannot be *boiled* as a preventive)." Freshly made dairy butter, uncooked, may be eaten freely against chronic constipation, especially by persons in years, and by thin persons of active habits. The chief point in which butter-milk differs from new milk is thus shown to be its poverty of fat, whilst otherwise it is nutritious, digestible, and refreshing, though to some patients the taste is disagreeable. Butter-milk is used

largely in Holland for the healthy, as well as for weakly invalids. It differs totally from human milk, yet frequently proves curative to infants when this latter fails. As obtained from the dairy, it should be a sour fluid full of finely suspended flocculent curd. It must be boiled at once; but to prevent wholesale curdling, a level tablespoonful of ground rice, or flour, to each thirty-five ounces, should be previously mixed with it. The boiling should be done over a slow fire, in an emamelled pot, whilst constantly stirring it until it has boiled up two or three times; also two or three tablespoonfuls of sugar should be added to each litre (thirty-five ounces), using cane, or beet sugar for the purpose, but not milk sugar. Metal spoons are not to be employed in the process, else the lactic acid will act on them chemically. When prepared after this manner, the butter-milk food, for infants, has a yellowish colour, and a sourish taste, and it is not more curdled than it was before being boiled. In cases of slight diarrhœa, the motions change thereby immediately; they become less in amount, consistent, and homogeneous; from being sour, their reaction becomes alkaline. The lactic acid, though present only in quite small quantity, produces an anti-fermentive action, which is of definite use. Moreover, ammonia is generated by the bacillus of butter-milk, and is helpful. For such curative objects a reliable butter-milk can be made at home, the necessary small outlay for a hand-churn being then incurred. New milk must be left to ripen for twenty-four hours before it is churned, a little sour milk being previously added, so as to turn it. But it will not answer to make use of sweet butter-milk, which does not contain any suspended curd. Infants under four weeks of age will need some cream in addition to the butter-milk. Soured milk will prevent or arrest noxious fermentative changes of the food when reaching the large bowels. Lactic acid bacteria, which become present in considerable numbers, are hostile to the growth of the putrefactive bacteria.

For making sour milk soup: half a pint of sour milk is mixed with a small dessertspoonful of fine flour, which must be whipped into it; thin with cold water, and add half a pint of scalding water, boiling the while, and stirring well all the time. If the soup becomes too thick, add hot water in order to thin it. Before dishing up, boil a little powdered or bruised caraway seeds. Add small squares of toast neatly to the soup, and pour the

decoction over it. When stomach disorder is present, the milk should be skimmed.

Dr. King Chambers has reminded us that, as to taking new milk for sedative effects, "our senses tell us of a peculiar aroma given off by such new milk, though this quickly exhales, whilst appearances seem to warrant the conclusion that the said aroma contributes to soothe the sensitive and wakeful nervous system, also assisting digestion." Again, the value of milk-sugar as a means of supplementing the carbohydrates of the diet must not be forgotten. If half an ounce of this sugar of milk be dissolved in five or six ounces of milk, the nutritive value thereof is materially increased. Likewise, a steady daily use of this milk sugar will frequently prevent constipation, and will obviate chronic rheumatism. On a milk diet the risk of intestinal decomposition within the body, as from animal food prolonged in its transit, is reduced to a minimum. It has been proved experimentally that milk when taken as food putrefies only with considerable difficulty, whereas meat decomposes very rapidly. Whilst standing also as new milk, this product is stable, because of its microbes, which cause it to presently turn sour with the formation of lactic acid, which is hostile to putrefaction. But if soda, as an alkali, be added to milk, then in spite of the said microbes, putrefaction takes place rapidly. These facts explain how it is that lactic acid will stop the diarrhœa due to corrupt matters within the bowels; likewise they make intelligible the medicinal value of fermented milk. Govighi, an Italian physician, drank daily a litre and a half of milk subjected to the lactic acid, and alcoholic fermentations (kephir), finding that within a few days the products of intestinal putrefaction disappeared altogether from his urine. For such a reason soured milk is to be much commended. Sir Thomas Browne, in *Religio Medici* (1635), remarks, "Some think there were few consumptions in the Old World, when men lived much upon milk; and that the ancient inhabitants of this island were less troubled with coughs when they went naked, and slept in caves and woods, than men now in chambers and feather beds. Plato will tell us that there was no such disease as catarrh in Homer's time, and that it was but new in Greece in his age. Polydore Virgil delivereth that pleurisies were rare in England, who lived but in the days of Henry the Eighth." Now-a-days, animals treated by electricity

—the high frequency current—when suffering from consumption of the lungs, have been proved to live twice as long as others in a like plight, but not treated thus.

For diabetic patients Devonshire cream is specially valuable. It contains only about half as much sugar of milk as ordinary cream; therefore it is peculiarly well suited to be a source of fat in the dietary of diabetics. One and a half pints of cream do not contain more fat than one pound of butter. Junket, on the contrary, contains a considerable quantity of milk sugar, which, though not fermentable by yeast, like cane sugar, is problematical for such cases. But some physicians allow sugar of milk to diabetic patients without apprehension of harm therefrom, maintaining that during digestion of the milk, its sugar of milk is converted entirely into lactic acid; in fact, it undergoes in the stomach precisely the same change that it does when treated with casein as a ferment in the dairy. "We do not act wisely in enforcing on the diabetic sufferer a diet which is really intolerable to him, or her. The object to be gained is to conciliate the stomach, appetite, and fancy, into taking the greatest possible amount of animal food, and of oleaginous matters; in fact, to assimilate the patient as far as possible to the Esquimaux with their Polar diet, or to Pampas Indians, who have nothing but beef and water, water and beef, from the cradle to the grave. And if the said patient eats the heartier for having a biscuit, or crust, or a glass of porter, or even a forbidden vegetable with his meals, it is better to give him his way than to tempt him to break through all rules altogether by playing the reckless truant." Diabetic patients should always chew their food slowly, and eat frequently, though moderately, taking their drink in a similar fashion. Junket (which contains a considerable quantity of milk-sugar) must be declared questionable for them.

The Devonshire delicacy, Junket, is made thus: Put three quarts of new milk into a china bowl, add three teaspoonfuls of rennet, and place it on the hob to set. When the curd is thick enough to bear, put a layer of scalded cream on the top, with a little nutmeg, and sifted sugar to taste; do not stir it. If sherry is added, its acidity will hinder digestion. By the Levantine people, a peculiar preparation of milk is made, which corresponds to our English curds and whey, or junket. It may be produced with us by warming a basin of new milk to blood heat, and immersing therein a portion of the inner, or woolly part of the

globe artichoke, and letting it stand in a warm place. After twelve hours the milk will be found transformed into a remarkable curd of excellent taste, and, if the milk was good, no whey is separated; but if it has been disturbed, then the whey will come apart. Now if a little of this curd be placed in warm, new milk, and if the same be kept awhile in a warm corner, it will transform the new milk again into Yourt, or curd, as before, and thus Yourt can be kept going throughout the season. This production of curd by the inner flowers of the artichoke was known to the ancient Greeks, and the recipe now given is according to a notice contained in the works of Aristotle.

There is an essential difference between the clotting of milk, as in junket, and the curdling of milk as in sour milk, when the casein is simply precipitated without being at all changed. Quite the reverse is the case with clotted milk, in which the casein, or curd, undergoes profound internal alterations, and becomes (says Dr. Hutchison) practically a new substance, with new characteristics. A so-called cream cheese consisting of curd placed on rushes (juncos), so as to let all the whey drain off through them, is again a junket. Syllabubs are made by the addition to milk (or to Colostrum, the first milk which a cow gives again after calving) of wine, as Sherry, Madeira, or Port, perhaps Brandy, or, it may be, Cider, with nutmeg, or cinnamon, and sugar. A syllabub, more correctly sillabub, signifies really nothing more or less than swell-belly, swell-bouk, (Icelandic). It would appear (*Reliquiæ antiquæ*), that in the fourteenth century whey was used generally as a drink; it was known of old as *Cerum*, quidam liquor, whey. "Down to the milke house," wrote Pepys, in his *Diary*, "and drunk three glasses of whey." Halliwell tells of "Wheywhig, a pleasant and sharp beverage made by infusing mint, or sage, in butter-milk whey." To extemporise whey, "add a teaspoonful of cream of tartar, dissolved in a little hot water, to a pint of warm fresh new milk. After straining, and cooling, it will be ready for use. The whey cure is sometimes combined with taking baths in this same liquid. Whey strained from curds produced by rennet with new milk, is a wholesome, nutritive drink, with some stimulating action on the kidneys, and is readily digested because the albuminous constituents are in solution, and by reason of the sugar of milk, as well as the mineral salts.

Separated milk, from which the cream has been abstracted, is

practically skimmed milk, which, if left to itself in not too cold a place, develops, through the action of a certain bacterium, lactic acid, with separation of the remaining casein. Such separated milk is now sold as a summer drink, being less sour than the old-fashioned skim milk. The popular notion that by taking away the cream beforehand all the goodness is lost, is quite a misapprehension for considerable curd is still held in solution, as well as milk-sugar; and if bread and butter, or a piece of chocolate, be taken with the separated milk, then the full value of the original new milk is obtained, this drink being meanwhile cheaper than beer, and preferable thereto. For sterilizing milk, a temperature of 190° Fahrenheit is under ordinary conditions a safe and easily practicable course; and to heat the milk once thus is all that is necessary. Being treated in this way, the milk will remain sterilized in a room at an ordinary temperature for twenty, or thirty hours, even in warm weather. But Professor Koch pronounces that to boil milk does not exterminate the bacilli of tuberculosis, whilst sterilizing milk impairs its nutritive quality. The more any natural food is altered from its natural state, the more likely is it to produce scurvy; for example, as by sterilizing new fresh milk. This, when unboiled, contains in one quart as much citric acid (such as that of lemons, oranges, and potatoes) as occurs in a large lemon. But when milk is subjected to boiling, its power of continuing to hold this acid (as citrate of lime) unchanged, is much diminished, the same becoming converted by heat into the comparatively insoluble crystallizable form: the chemical reaction produced being that of converting the bicitrate of calcium into a less soluble tricitrate of calcium. Infantile scurvy is most prevalent among the classes where a child's diet is carefully restricted to boiled milk.

When a patient's digestion is very weak, if living in the country, or keeping a cow, he should make a dietetic trial of "strippings," that is, the milk obtained by re-milking the cow soon after it has been already milked. The supplementary milk will flow in quite a thin stream, at the end of the first milking, being rich in cream as fattening food, but containing very little casein, or more heavy proteids, and being thus less difficult of digestion than the first milk. In acute disease of the kidneys, a milk diet is found to increase the output of urea (poisonous, if retained) and of other solids, whilst diminishing the amount of morbid

albumen in the urine. If the patient grows tired of new milk, then butter-milk will make a welcome change ; or the "skimmed milk" from which the cream has been first separated, and in which, if left to itself and not too cold, is developed through bacterial action lactic acid, with a formation of the casein into curds, leaving a liquid whey, suitable as a change from the butter-milk. This whey will contain sugar of milk, and some of the mineral salts, though with a tendency to constipate; in which case, nevertheless, the swarms of putrefactive microbes, which commonly occupy the large intestine, producing poisonous alkaloids, toxins, and fatty acids, will be prevented from doing mischief by the lactic acid of the whey. A similar curative effect will follow the external use of butter-milk, or whey, in cases of chronic skin disease, such as persistent eczema, by destroying the noxious microbes which infest the affected skin. Amongst the normal symptoms exhibited by a patient on a purely milk diet, are a certain amount of drowsiness, and the passage of a large quantity of urine of a pale greenish colour ; the tongue becomes coated with a white fur, and there is often a sweetish taste in the mouth. A moderate degree of constipation is favourable, orange-coloured stools being passed at intervals of two or three days. But if this symptom becomes too pronounced, then a little coffee or caramel may be added to the morning's milk, or a small plateful of stewed fruit, apples, figs, or French plums, may be eaten once a day.

Koumiss, which consists, in its integrity, of mares' milk, fermented, is of particular value as a food for weakly, or consumptive patients, because of certain products generated from the milk sugar, which materially help a defective power of digestion. An imitation of the Russian Tartar Koumiss is now made with considerable success at our principal dairies, with cows' milk, sugar, and yeast. The original Koumiss was used by the Bashkirs of the steppes of Orenburg, and Ssamura, having been prepared by them from time immemorial as a restorative food, and a mild alcoholic drink, after the hardships and deprivations endured throughout a rigorous winter. It attracted the attention of the Russian physicians in 1830, and thirty years later, of the Germans ; but mares' milk would be too laxative for ordinary use. Kephir is the modern substitute for Koumiss. It is a white, foaming, slightly sweet, acidulous, and alcoholic refreshing drink, the alcohol increasing until the whole of the sugar is used

up, and a small amount of lactic acid being produced at the same time.

Kefyr grains, or fungi, are a ferment known to the hill folk of the Caucasus as acting on milk. Mares' milk contains but little fat, little casein, and much lactose (or sugar of milk), of which constituents the proportions are just the reverse in cows' milk. In the production of genuine Koumiss, the vinous, and the lactic acid fermentations run side by side; three layers are produced in the bottles containing this Koumiss; the uppermost a little oil, the middle the vinous solution, and below some casein. Before use these are to be mixed by agitation. Home-made Koumiss may be prepared by mixing half a pint of water, half a pint of butter-milk, four pints of new milk, and one ounce of loaf sugar, leaving the mixture in a warm place, and shaking it occasionally for thirty-six hours. This will make a palatable form of nourishment, especially suitable for albuminuria from Bright's disease; likewise for the comparatively harmless albuminuria of adolescence, which is independent of any kidney trouble, but rather arising from defective digestion during growth; such latter illness yields readily to a strict milk diet, with rest in bed. The same beverage will generally overcome sleeplessness from imperfect digestion. Its lactic acid is admirable for supplementing the gastric juice; and the state of vitality of the fermented Koumiss greatly assists the digestive processes.

Again, an unaltered pure albumen, capable of being taken up readily into the system by easy digestion, and such as cannot be had in any meat extract (as Liebig felt bound to confess), exists in what is known to-day as Plasmon, the albumin of fresh milk, and with the original salts, phosphates, etc., all retained. It occurs as a dry granular powder, available for various culinary modes of preparation. Fresh meat furnishes such albumen, and essential salts; but in making an extract of the meat much common salt has to be added, and the albumen is left in the residue, which extract cannot be fashioned into a complete article of food, not even by adding this residue, when dried, to the meat extract. But it may be fairly claimed that Plasmon is the albumen of milk, not spoilt by any addition of salt, and so remaining unchanged, in its nutritive integrity. Moreover, it is alleged that one teaspoonful of Plasmon represents—as regards the proteids and nutritive organic salts—a

quarter of a pound of best fillet of beef, being at the same time free from sugar and fat.

All new Milk, whilst yet in the animal's udder, is sterile as regards any noxious bacterial life; but when drawn, and examined microscopically at its newest state, it always contains some leucocytes; if these multiply to twenty or thirty in the field of a one-sixth objective, the Milk is to be suspected. Happily invention is already coming to the rescue, and a vacuum device for the milking of cows is obtaining a wide use. The air within the sterilized milk-can is first exhausted, whilst a flexible tube is then connected with the top of the can by one of its ends, and with the teats of the cow by four caps at the other end (stop-cocks being provided for working the apparatus), when suction withdraws the Milk from the udder into the can, without the least access of air from first to last. The lower portion of each cup is glass, which permits the operator to watch the working of this device.

Pure Milk should be white in colour, yet the customer has generally a notion that yellowness means richness. This effect can be produced easily, and without expense, by the accommodating milkman. He uses annatto, or turmeric, or saffron, knowing that a few drops of either will make the Milk as yellow as a canary, and without affecting its taste. But the latest and most favourite colouring is a coal-tar product (employed also for giving the lovely pink, orange, and violet hues seen in modern sweetmeats, and confectionery). This is called by the chemist sodium di-methyl-amido-azo-benzene-sulphonate, and is of a bright orange colour. What might happen, may well be asked, if one were to swallow this fearfully long and difficult name, as well as the sophisticated product it signifies? The colour of Milk yielded by Jersey cows is naturally yellow; likewise by cows newly turned out to grass; but the best and richest Milk is of a chalky white colour. Annatto (as employed sometimes for imparting a yellow appearance to the milk) is a dye procured from the seeds of the Arnatto tree of tropical America; it is, fortunately, harmless. In the Southern States there grows the Goat's Rue (*Galega officinalis*), which is a remarkable milk-producer; as such the plant is gathered, and cured for making an elixir. This increases the weight of lean persons, or of those who have lost flesh (apart from wasting progressive disease) more effectually even than cod-liver oil, being a powerful

promoter of nutrition. A liquid extract thereof can be procured from our manufacturing chemists. It assists capitally in augmenting the flow of breast-milk for mothers.

Pure, good Milk, becomes naturally converted into curds and whey, by standing until sour, but even then it is salutary, and wholesome. But if boracic acid is used, the souring process is arrested injuriously, the milk becoming converted into a tasteless, mischievous, and quickly-putrefying fluid, which is apparently all right as long as kept cold, but when subjected to any degree of heat gives off a very offensive odour. The preservatives employed by unscrupulous vendors for preventing sourness in stale Milk are salicylic acid, borax, boracic acid, and formalin, these being potential drugs, and destroyers of germs. Sometimes starch, and gelatine, are used for thickening milk which is to be sold as cream. "At one time," says a grimly humorous moral of to-day, "the man ate the cream: now they cremate the man!" It is to be borne thoughtfully in mind that cows' Milk, in whatever form or condition other than that of "new" from the udder, is an incomplete and defective kind of food. As to allowing any preservative therewith, even borax, if comparatively safe when in a very limited quantity, there is a danger of getting this to excess, because of its use in several repetitions altogether; first at the farm, then by the middleman, next by the retailer of butter and milk, finally, too, in the kitchen; so again likewise with the bacon, or fish; and though in each case the amount employed may be small, yet in the aggregate the total will be harmful, resulting in kidney mischief, whitlow of fingers, or some other morbid affection.

"These chemicals are preferred because they do not withdraw water, as salt does, whilst, furthermore, they retain the natural colour of the food-substances." But it has been repeatedly shown that the use of borax in this way is calculated to induce a diseased state of the kidneys. Dr. Harrington has experimented on cats for clearing up the question. Twelve cats were selected, of which one received no preservative; six received borax in varying amount, and four received other preservatives). Of the six cats who took borax, one died at the end of six weeks, whilst the others survived to 133 days, more or less. Of these six cats five showed mischief done to the kidneys.

Professor Koch, of Berlin, when speaking about infection by

bovine tuberculosis through Milk, reasoned that as in cases of infection by poisoned meat this infection is widespread, and unmistakable, yet tuberculous meat, whereof a large amount is consumed daily, causes no such widespread infection thereby; and if the tuberculous meat is so harmless, why not equally so tuberculous milk? There can be no doubt that most persons have in this way eaten tuberculous bacilli; how is it then that infection therefrom is not widespread? In the course of 1901 Professor Koch received a number of notices from persons who for several years had been drinking tuberculous milk harmlessly, and who only discovered it on the death and inspection of the cow which had supplied the said milk; and yet they did not become morbidly affected.

In the south of France, Milk is sometimes flavoured with garlic, but aromatic herbs are more to the liking of the English stomach. A certain Danish soup is preferred in Holland to animal broths in hot weather, this being a thick milk mess. "Rinse some soup plates, or bowls, with hot water to which a teaspoonful of vinegar has been added; pour fresh Milk in at once, and put in a warm place; in eight hours this should be thick; serve cold, with brown bread-crumbs, some powdered cinnamon, and sugar." In the quaint *Babee's Book* occurred a curious passage concerning the relation between Milk, and wine, as then regarded:—

> "Milk before wine I would 'twere mine!
> Milk taken after is poison's daughter."

Pepys also (1667) records a pretty story (related by Muffet in *Health's Improvement*, 1655) about Dr. Caius, who built Caius College at Cambridge: "That being very old, and living at that time only upon woman's milk, he, while he fed upon the milk of an angry, fretful woman, was the same himself; and then, being advised to take it of a good-natured, patient woman, he did become so, beyond the common temper of his age." In Pepys' *Diary* it is told he called out stoutly for "plenty of brave wine, and, above all, Bristol Milk," this latter being a rich beverage made of the best Spanish wine, and "famous over the whole kingdom." Again, Milk-punch is a drink concocted of new Milk, spirit (brandy, rum, or whisky), sugar, and nutmeg. "I don't know," replied Mr. Pickwick (when asked to decide as to the character of a drink contained in a small case-bottle,

which Mr. Bob Sawyer let down through the coach-window by his walking-stick with some affected carelessness), "but it smells, I think, like 'Milk-punch.'" Pepys (June 13th, 1668) "at the house of Uncle Butts, in Bristol, had good entertainment of strawberries, a whole venison pasty (cold), and again a liberal allowance of (the aforesaid) Bristol Milk"; "which rich beverage," says Lord Macaulay, "is made of the best Spanish wine, and celebrated over the whole kingdom as *Bristol Milk*." Burnt milk is said by Lincolnshire rustics, to be "bishoped" because on a certain occasion all the villagers ran to their doors so as to see a bishop pass by, and meantime their milk left on the fire became scalded. Tom Hood wrote to Dr. Elliot's little girl about dandelions, that "they are large, yellow star flowers, which often grow about dairy-farms, but give very bad milk."

In the treatment of continued fever, where success depends altogether upon maintaining the patient's strength throughout weeks of wasting illness, Milk can play a most important part. It is essential that plenty of sustenance should be continuously taken during the course of the fever. Recent research has shown that such a free administration of food does not, as was formerly supposed, tend to raise the temperature of fevered patients; also that the food is not under these circumstances merely poured into a digestive apparatus unable to deal with it; since the absorption, at all events of light nutriment, goes on as perfectly in the febrile as in the non-febrile state. Seeing, moreover, that the waste by fever is chiefly of the bodily solids, or proteids, it follows that a reparative supply of the same must be kept up in the dietary. Supplementary thereto as economiz'ng these sclids are milk sugar, and fats, almost equally essential. And then, again, the nourishment given with a liberal hand must be liquid. It is demanded in plenty by the burning tissues under constant fever, whilst because of the dry, parched mouth, mastication would be difficult. Milk, therefore, best meets these several needs; four pints in the day will generally suffice for the patient's comfort; it may be taken plain, or diluted with water, .(alkaline, or effervescing.) If additional sweetness is desired, milk sugar is one of the simplest, and best materials to use, dissolving one or two teaspoonfuls of this in a little hot water, and adding it to each tumblerful of milk; or arrowroot, or cornflour may be made with milk

into a thin gruel. An egg-white mixture will sometimes help when very little food can be taken at a time, or where vomiting is troublesome. "Imperial drink" will serve to supply a certain quantity of sugar when allowable; but if the bowels are relaxed barley-water should be substituted. Alcohol will be necessary if the circulation falters, the pulse being small, quick, and perhaps irregular, or if nervous exhaustion is declared by sleeplessness, tremors, and low wanderings of the mind; or, again, if the digestive powers appear to be failing, as shown by inability to take food, by dry tongue, and relaxed bowels, the temperature being persistently high; particularly if the patient was already in a feeble bodily state when attacked, as in elderly, or alcoholic subjects. Sound malt whisky, with water, is as good a form of alcohol as any other, or, if the prostration is extreme, brandy (genuine Cognac) must be preferred. If wine is chosen by preference, or necessity, then old sherry is best because of its restorative ethers; or good, dry, effervescing champagne, if sickness is present. For the delirium of a hard drinker bottled stout is found to exert a particularly sedative effect.

Lactose (sugar of milk) is credited with the dispersion of rheumatic deposits, and chronic enlargements about joints, to an extent almost marvellous, if steadily taken every day for some long continuance of three months, or more, whilst at the same time a suitable diet is adhered to. The dose of lactose is from half to one teaspoonful twice a day, in water, or milk. When rheumatic gout, with deposits about the enlarged joints of feet, hands, knees, etc., prevailed as the result of freely indulging in alcoholic liquors, a hundred or more years ago, so that the nether limbs of such drinkers were no longer shapely, trousers were introduced. They may be said to have owed their origin to old-world royalty, which in those days ate, and especially drank, heavily, and consequently became disfigured by gout in the lower limbs. Then noted personages, so as to vindicate their character, and symmetry of form, adopted the device of close-fitting pantaloons; to wit, George the Fourth, as Prince Regent; with his brothers the Dukes of York, Clarence, Cumberland, and Sussex, as well as the French Princes, afterwards regnant as Louis the Eighteenth, Charles the Tenth, and Louis Philippe. King Frederick William the Third of Prussia, and many other illustrious personages also adopted pantaloons, which were at the time a source of endless ridicule and entertainment, to

Gilray, and other caricaturists of the age. Within the last few years a marked return has been made by men of all classes in this country to garments shaped closely fitting to the leg, as gaiters, and particularly knickerbockers, with hose; which fact has perhaps a bearing on improvement in the size, and symmetry of their legs, by reason of more temperate eating and drinking in these modern days.

MOSS, ICELAND, AND IRISH, (CARRAGEEN).

THE Lichen (*Cetraria islandica*), or Iceland Moss, is now of British growth, being found especially in Wales, and Scotland, though most probably the Icelanders were the first to learn its helpful properties. In two kinds of pulmonary consumption this Moss will assist to promote a cure,—that with active bleeding from the lungs, and that with profuse purulent expectoration. The Icelanders boil the Moss in broth, or dry it in cakes, which are used as bread; they likewise make a gruel of it, but the first decoction in boiling water being purgative, is thrown away. An ounce of the Iceland Moss boiled for a quarter of an hour in a pint of milk, or water, will yield seven ounces of thick mucilage, which is found also of much use against dysentery. Contained in the Moss are cetrarin, uncrystallizable sugar, gum, and green wax, with phosphate of lime, and potash. The Moss, again, affords benefit in diabetes, and for general atrophy. Francatelli directs for making Iceland Moss Jelly: "Boil four ounces of the Moss in one ounce of water; then add the juice of two lemons, and a bit of the rind, with four ounces of sugar, (and perhaps a gill, or half pint of sherry); boil up, and remove the scum from the surface; strain the jelly through a muslin bag into a basin, and set it aside to become cold, but it is more efficacious when eaten warm." This Moss also includes chemically "lichenin," and "iso-lichenin," which is a soluble sort of starch. Dr. Hutchison concludes that its nutritive value is *nil*. For making a "Brawn of Iceland Moss": "Stew two handfuls of Iceland Moss several times in scalding water; add one pint of water, and let it boil for some minutes; then pour off this bitter-tasting water, and add fresh water (a pint), and let it boil for half an hour until the decoction has been reduced to half the quantity, and on cooling becomes a jelly; next strain the decoction, and boil it again with white sugar-candy until all

is dissolved; clear it like brawn with half the white of an egg; strain it again through a napkin into a dish, and put it in a cold place so that it may set. Take a teaspoonful frequently. Where heartburn occurs leave the sugar out."

Irish Moss (*Carrageen*) is collected chiefly on the north-western shores of Ireland, also on our English rocky coasts, and some in Hamburg. Its chief constituent is a sort of mucilage which dissolves to a stiff paste in boiling water, this containing some iodine, and much sulphur. The Moss needs soaking for an hour or more in cold water, before being boiled for use in water, or milk. It contains starchy, heat-giving nourishment, about six parts thereof to one of flesh-forming food, whereby its jelly is found to be specially sustaining to persons suffering from pulmonary consumption, with an excessive hectic waste of bodily heat. The botanical name of this Moss is *Chondrus crispus*, and it varies much in size, and colour. At one time its cost was half-a-crown for a pound. Whilst growing in small pools it is shallow, pale, and stunted; but when found at the bottom of a deep pool, or under the shadow of a big rock, it occurs in dense masses of rich ruddy purple, with reddish-green thick fronds. The Moss always needs to remain well washed by the tide. It is very wholesome for gouty persons, and for those who are prohibited from eating starchy foods, as it contains neither sugar, nor starch, but a large amount of gelatinous, and mineral matter. It may be cooked as blancmange, or baked with milk as a pudding, being sweetened with sugar, and flavoured with lemon-rind, ratafia, etc. The iodine in its composition is of use for chronic sore throat, whilst the Moss is medicinally demulcent.

"That throat so vex'd by cackle, and by cup;
Where wine descends, and endless words come up:
Much injur'd Organ!"

MULBERRY. (*See* FRUITS).

SIXTY years or so ago, there stood a grove of Mulberry trees in what is now the Fulham Road, these having been planted to produce leaves for cultivating silkworms. James the First (1609) had devoted a piece of ground to such a purpose, near his Palace at Westminster. The trees flourished, and Charles the First gave the custody of them, with a house attached, to Lord Aston.

The place was then known as the Mulberry Garden. In the time of the Commonwealth it became a resort for pleasant entertainment, and fashionable folk forsook Spring Gardens for this Mulberry Garden. Pepys called it "a very silly place." John Dryden was fond of going there to eat tarts. From the Book of Maccabees we learn that the juice of Mulberries, being red like blood, was employed for exciting the elephants of Antiochus to battle.

MUSHROOMS.

THE numerous kinds of Mushroom (*Agarics*, *Boleti*, etc.) which spring up around us, (and of which more than a hundred edible sorts are to be found), do not possess any special medicinal virtues except as regards two, or three; nor do those which come to table boast any greater food value than other ordinary fresh vegetable products. Indeed, in some respects they are inferior, and their very nature as saprophytes, or products of rotting vegetation, and decaying organic matter, stamps them as somewhat ignoble food. The popular belief that Mushrooms are highly nutritious—one kind being described as the vegetable beef-steak (*Hepatica fistulina*)—is more or less a delusion. As compared with meat, their supply of proteids, or flesh-formers, is very small. We have to tell the vegetarian he must consume at least ten pounds of Mushrooms in order to gain the equivalent of a little over one pound of prime beef. These fungi, however, furnish an unusual amount of potassium salts, which fact is much to their credit. As to the dry, solid constituents of Mushrooms, they differ very materially in kind from the superior solids of meat. With the juice of the Horse Mushroom (*Agaricus arvensis*) Catsup is made. This Catsup, or Ketchup (from the Japanese), is to be concocted thus: "Lightly bruise the Mushrooms, and strew over them a little salt; then boil with spices, and herbs, the juice which may be expressed after the Mushrooms thus treated with salt have stood for from twenty-four to forty-eight hours." Sydney Smith, when a hard-working curate (1798) in the midst of Salisbury Plain, said he often dined on a mess of potatoes sprinkled with a little Catsup. Once a week the butcher's cart came over from Salisbury, and it was only then he could obtain any meat.

For making Mushroom sauce: "Wash, peel, and stalk enough

'button' Mushrooms to fill a half-pint measure, and add them to two gills of the best beef gravy, which has been previously thickened with from one to one and a half teaspoonfuls of flour, and stirred over the fire till it boils. Allow the Mushrooms to simmer slowly in the sauce for ten, or twelve minutes; then stir in four teaspoonfuls of Mushroom Catsup, and half a teaspoonful of lemon-juice; season with salt, and pepper, if necessary, and serve very hot." The field Mushroom for cooking can be readily distinguished from any harmful fungus by the fresh pink colour of its gills underneath the top disc, by the solidity of its stem, the fragrant anise-like odour which it emits, and the separability of its outer skin. The chief chemical constituents of wholesome Mushrooms are albuminoids, carbohydrates, and fat, with mineral matters, and water. From the Golden Spindlespike (*Clavaria fusiformis*), when stewed, a sweet dish may be made. Our English Agaric, or field Mushroom, furnishes phosphate of potassium, a cell salt especially reparative of exhausted nerve tissue, and its energies. Mr. A. Broadbent, of Manchester, teaches that an excellent tea for invalids may be made from the ordinary edible Mushroom (*Agaricus campestris*) which is highly nitrogenous, and endowed with much fat. The beef-steak fungus grows on oak trees, and resembles in its dark-brown appearance, its sapid taste, its animal odour, and its soft, pulpy touch, the commodity after which it is named. "Fried in butter," says Dr. Cooke (Royal Horticultural Society), "it is delicious." The Roman Emperor Claudius was killed by eating Mushrooms. "Hither the Emperor repaired in hope to recover his health through the temperature of the air, but, contrarily, here met with the Mushroomes that poysoned him." If a carefully-peeled onion is boiled with Mushrooms, and comes out clean-looking, they may be eaten with confidence; if it turns blue, or black, they should be thrown away.

Strong alcoholic drinks ought never to be taken together with, or immediately after eating Mushrooms. Experienced fungus eaters (mycophagists) have found themselves suffering from severe pains, and troublesome swellings, through drinking whisky and water at a Mushroom meal; whereas a precisely similar meal, minus the whisky, could be eaten with impunity by the very same experimentalists. Edible Mushrooms, if kept uncooked, become dangerous: they cannot be sent to table too soon after being gathered. In Rome our ordinary Mushroom (there known

as the Pratella) is held in very small esteem; and the worst wish an Italian can express against his foe is "that he may die of a Prateola." If this species were exposed for sale in a Roman market, it would be certainly condemned by the inspector of fungi.

The Mushroom is styled in general a fungus, from the Latin "*funus ago*," I cause a death. Nevertheless, Mushrooms were exalted to the second course on the Cæsarean tables, with the noble title *Bromotheon*, "a dainty fit for the gods," (to whom they sent the Emperor Claudius, as they have many since into the other world.) So true it is, "He who eats Mushrooms several times '*nil amplius edit*,'—eats no more of anything." In every case Mushrooms should be cooked very slowly. Place them in a pie-dish with plenty of salt, and butter, adding in some cases a little water; also, if liked, parsley, onion, garlic, or other condimentary herbs. The common Mushrooms (*Agaricus campestris*, and *Agaricus arvensis*) will take an hour and a half to be properly cooked after this fashion. Of all animal and vegetable matters, there are three only which possess the principle of sapidity in the highest culinary and gustatory sense, *viz.*, meat, cheese, and mushrooms. This sapid principle is an alkaloid, or a series of alkaloids, which is practically designated as osmazome. The usual field Mushroom (*Agaricus campestris*) is ordinarily eaten at two stages of its growth,—one when it has just risen from the mycelium, and is small, with its hymen still closed, and then styled a *button;* and the other when it is just expanded, its hymen forming a ring round the stalk, and the spore-bearing ridges making a rosy lining to the expanded umbrella. To be valuable, Mushrooms should appear plump at both these stages. If the spores have turned black, then the Mushrooms are over-ripe. Flabby, leathery, fissured, black-lined Mushrooms are to be avoided. The poisonous kinds possess permanently white gills, which do not touch the stem, whilst a thin ring, or frill, is borne by the stem at some distance from the top, and the bottom of the stem is surrounded by a loose sheath, or vulva. For poisoning by noxious Mushrooms, antidotes can be injected under the skin, whilst very small doses of strychnia are to be given in coffee.

The Puff-ball (*Lycoperdon giganteum bovista*) grows usually on the borders of fields, in orchards, or meadows, also on dry downs, and occasionally in gardens. It is so called from the habit of puffing out, or suddenly discharging a cloud of dusty

spores when shaken, or squeezed, and when the chamber in which the spores are developed has been thus burst open. This is the *Fist ball*, foist, fuzz ball, Earthpuff, Bovista, Blind Harry, Blindman's-buff, Devil's snuff-box, etc. ; it is edible whilst young, being then smooth, globose, and yellowish white. When ripe its fine brown-black powder is a capital application for stopping bleeding from slight cuts, and wounds. This also makes a capital drying powder for dusting on weeping eruptive sores between approximate parts, as the toes, fingers, and arm-pits. When the fungus is burnt its fumes exercise a narcotic effect, and will stupefy bees, so that their honey may be removed with impunity. It has been suggested that these fumes shall take the place of chloroform for performing minor surgical operations with its aid. When young, and purely white, the Puff-ball may be cut into slices a quarter of an inch thick, and fried in fresh butter, with pepper, salt, and pounded herbs, each slice being first dipped in egg-yolk. Pieces of its dried inner woolly substance, with a profusion of minute snuff-coloured spores, have been long an article kept by village dames for use to staunch cuts, a ready appliance being a piece of Puff-ball to be bound over the wound, and left there until healing has taken place. Sometimes when a full meal of the Puff-ball, fried in butter, or stewed in milk, has been eaten, undoubted evidence of the narcotic effects have shown themselves.

For discerning the Beef-steak fungus already mentioned, its peculiar mode of growth is a sufficient guide. It sticks out from the trunks of trees, usually near the roots, in a large horizontal, flat, oyster-like shape, one layer above another like a section of an oyster grotto. When cooked, and laid out on a dish, it very much resembles the ear of a colossal negro ; if gathered near the sea, particularly on our East Coast, this fungus seems already sufficiently seasoned through its briny flavour. By too much stewing these edible fungi lose their appetizing moisture, and become leathery ; whilst too little cooking leaves them of an india-rubber consistency, and not more attractive to the taste.

Truffles (*Tuber cibarium*) are not fungi, but subterranean tubers of an edible sort found in the earth, especially beneath beech trees, and they are uprooted by dogs trained for the purpose. In Italy these tubers are fried in oil, and dusted with pepper. For epicures they are mixed with the livers of fattened geese in our *Pâté de foie gras*. They are stimulating, and heating,

insomuch that for delicate children who are wasted in flesh, and require a *multum in parvo* of fatty and nitrogenous food, in a compact, but light form which is fairly easy of digestion, the *Pâté de foi gras* on bread is an admirable recipe. The English Truffle is white, and best used in salads. A taste for Truffles has to be acquired; then with those persons who gain it this taste becomes a passion, and they get to regard the tuber as a superlative morsel. Yet irreverent novices make light of the dish, and compare cooked Truffles to turnips flavoured with tar. (*See also* respecting Truffles, pp. 346, 347.)

MUSTARD. (*See* HERBS.)

A MUSTARD poultice made with the farina of black Mustard seed, and water, (with, or without some wheaten flour added) into a paste, constitutes one of the most effectual external stimulating applications we can employ. It quickly induces a sharp burning sensation on the skin of the part, with redness, (which would presently go on to destructive inflammation of the cutaneous surface, implicating the true skin below more deeply than does the old-fashioned blister of Spanish fly); so that the sinapism, or Mustard poultice, has superseded the blister, because acting more promptly, and more energetically for the speedy relief of internal congestions. A poultice made entirely of Mustard-seed should not be kept applied longer than ten minutes at a time. The volatile oil of this Mustard-seed, when mixed with spirit of wine (twenty-four drops of the oil to each fluid ounce of spirit) makes a capital liniment for external use against the painful stiffness of chronic rheumatism, or for determining blood derivatively to the surface from deeper congested, or aching parts. Against a headache for which prompt relief must be had, if a whole tin of Colman's Mustard is put into a large, hot bath, and the sufferer remains in the bath for ten or fifteen minutes, and lies down in the room for half an hour afterwards, the brain will then be far clearer for a while than even in ordinary health.

MUTTON (*See* MEATS.)

NUTS.

THE Hazel Nut is wild, and the Filbert is got from the same tree when cultivated. Formerly the Hazel was a very abundant,

indigenous tree throughout England. Filberts are superior nuts for dessert, being free from oil, and therefore seldom disagreeing. In 1897 a number of physicians in various parts of Europe made experiments for deciding as to the nutritive, and medicinal properties of all kinds of Nuts, and published their conclusions, favouring the use thereof in both capacities under certain conditions. One fact advanced was that Nuts contain a special kind of salt, particularly adapted for softening, and lubricating the muscular coats of arteries. Some of these physicians asserted that elderly persons would be benefited by a more liberal Nut diet; but Nut-meats must be thoroughly masticated, or finely pounded, so that no hard, insoluble pieces may reach the intestinal canal. Nuts are practically devoid of such carbohydrates as starch, and sugar, except cellulose, whilst rich in proteid, and fat; they may therefore be given with advantage in almost every case of diabetes. The fatty matter predominates in their composition, and by reason of this fat various Nut-butters have been prepared, which are actually quite as nutritive as ordinary butter, and more economical; nevertheless, they are not readily digested in the stomach, partly because their fat is often rancid, and partly because their structural cellulose is so firm, and close, and compact.

> "The sweetest nut hath sourest rind;
> Such a nut is Rosalind."—*As you like it.*

For persons whose teeth are defective, Nuts may be ground in a small nut-mill, as made for the purpose. Grated nuts are an excellent addition to stewed fruits; they are much in favour with vegetarians. Roasted Hazel Nuts (first removing the skin thereof by rubbing them when hot) are excellent with bread and butter. The Hazel Nut (*Coryllus avellana*) contains an abundant supply of vegetable oil, and is therefore of service (to persons who can digest it) for keeping up the bodily warmth in cold weather. Nut sandwiches are popular in New York, made with brown bread, buttered, and cut in very thin slices, which are then sprinkled with chopped Nuts.

The Chesnut, as already described, is probably of the chiefest dietetic value among Nuts. Evelyn says of them "they are a lusty and masculine food for rustics at all times, and of better nourishment for husbandmen than cole and rusty bacon, yea, or beans to boot." One of the witches in '*Macbeth*'

tells of "a sailor's wife with chesnuts in her lap," who "munch'd, and munch'd, and munch'd." Brazil Nuts (*Juvia*, or *Castanha*) are of true use against chronic constipation, and piles. One pound of these Nuts will yield eight ounces of the kernels, which furnish five ounces of vegetable oil, the residue being proteids, and mineral constituents. If well masticated, and taken even as a principal dish at a meal, they will not disagree. The entire fruit contains four, five, or even eight of these Nuts. When grated they are an excellent substitute for suet, and may be used for making cakes, and puddings, instead of other fat: four ounces of the grated kernels to twelve ounces of flour; thus teaches Mr. Albert Broadbent, of Manchester.

Similarly, thirty large Walnuts, without the shells, will contain as much fat as two and three-quarter pounds of moderately lean beef. The Walnut is botanically *Juglans regia*, "the Royal Nut of Jupiter"; it is also named Ban nut, Ball nut, and Welsh nut (Walnut). Whilst unripe this Nut has medicinally worm-destroying virtues; if pickled when green, it serves to make by the vinegar, diluted with water, a capital gargle for sore throats, even if slightly ulcerated. The kernel, or inside edible part (minus its skin), affords an oil which is not congealed by cold, and which painters find very useful on this account; it proves, further, of service when applied externally for troublesome skin diseases of the leprous type. Indeed, the Walnut has been justly termed vegetable arsenic, because of its curative virtues in eczema, and other obstinate skin diseases. The unripe fruit is laxative, also of beneficial use in thrush; whilst the leaves are found to antidote syphilis, as likewise do the green husk, and the unripe shell. Obstinate ulcers may be cured with sugar well saturated with a strong decoction of Walnut leaves. Kiln-dried Walnuts, well kept, and of some age, are better digested than newer fruit; in contrast to old gherkins, about which it has been humorously said, "Avoid stale Q-cumbers: they will W up." In many parts of Germany the peasants literally subsist on Walnuts for several months together. The bark, or thin, yellow skin, which clothes the inner nut, is a notable remedy for colic, being first dried, and then rubbed into powder, its dose ranging from thirty to forty grains, with a tablespoonful or two of peppermint water. To eat Walnuts produces troublesome coughing in some persons. After expressing

out the oil from the kernels, a cake can be made of the residual pulp, which is good food for cattle. These kernels contain oil, mucilage, albumin, mineral matter, cellulose, and water. *Nucin*, or *juglon*, is the active chemical principle of the nuts, and of the whole Walnut tree. The leaves, when slightly bruised by rubbing, emit a rich aromatic odour; they are of the highest value (particularly those of the American black Walnut tree) for curing scrofulous diseases, and for healing chronic indolent sores. The affected parts should be washed several times a day with a strong decoction of the leaves, and a tea made therefrom should be drunk internally, half a teacupful at a time (one ounce of the leaves to twelve ounces of boiling water). A green Walnut boiled in syrup, and preserved therein, is an excellent homely preventive of constipation; the nuts become black by boiling. But, says Charles Lamb, in his simple story of *Rosamund Gray*, "Shall the good housewife take such pains in pickling and preserving her worthless fruits, her walnuts, her apricots and quinces; and is there not much spiritual housewifery in treasuring up our mind's best fruits, our heart's meditations, in its most favoured moments?"

The Pea-nut (*Arachis hypogæa*), although botanically one of the pulses, really resembles more closely one of the true nuts, being like these, rich in proteids, and fat, (so that it may be well used as a diabetic nutriment). A patent food, under the name of Nutrose, is in the market as prepared from Pea nuts, which also, after expression of their oil, furnish sustenance for cattle in the same way as linseed gives residual oilcake. Half-a-dozen, or more years ago, bread made from Pea-nuts was experimentally introduced as part of the rations for soldiers in the German army; but after some favourable reports, it was decided that this bread was too strong and concentrated for the general regime, since it upset the digestive organs of many who ate it. It was thought that better success might be attained by mixing the Pea-nut meal with other cereal foods. An excellent Pea-nut candy is to be manufactured after the same manner as cocoa-nut candy: "Take an equal measure of Pea-nuts (chopped), and of white loaf sugar, three-quarters of a pound of each, having first shelled, skinned, and chopped the nuts, and warmed them in the oven. Put the sugar in the frying-pan, and stir with the back of an iron spoon until free from lumps, and a clear, brown syrup; then add the Pea-nuts; stir well, and pour the candy

on an inverted baking tin, marking it into squares whilst hot. The baking tin is not to be greased."

For brain-workers *Nut cream* is much to be commended. Pound in a mortar, or mince finely, three blanched almonds, two walnuts, and two ounces of pine kernels; steep these overnight in orange, or lemon juice, so as to make a cream; it should be prepared fresh every day, and may be used with bread instead of butter. *Almonds*, when eaten by themselves, or with raisins, should be well masticated, and not more than two ounces of the Almonds should be taken at a meal by persons who follow a sedentary occupation. An emulsion of sweet Almonds is useful in bronchial troubles, hoarseness, and irritable, tickling cough; it should be made by grating the blanched Almonds finely, with the addition of orange-juice, or lemon-juice, and mixing these well together. The Almonds should always be first divested of their skins (which are indigestible) in quite hot water. Bitter Almonds contain in a hundred parts nineteen of essential oil, and some prussic acid present minutely, but still poisonous.

A while back in many English places, notably at Kingston-on-Thames, the Sunday within the Michaelmas octave was known as "Crack-nut Sunday," when nuts were cracked during Divine service by many of the congregation, both old and young, this being done without objection on the part of the Church authorities.

Pine Cones (*Pignolia*), gathered from huge trees in Italy, (and of which each petal contains two kernels, enclosed in hard shells respectively, these being very oily, with a distinct Pine flavour,) have their kernels commended by doctors as easy of digestion, and as containing a higher percentage of proteids than any other food of the same nature. In England these kernels are much used in place of Almonds, tons being employed in cooking, and for confectionery.

Cashew nuts from India, are greatly esteemed for dessert. Their kernels are hard to extract, mainly because an acrid oil (ardent like vitriol) exists in the shells. When burned the Cashew gives off an odour resembling that of Cayenne pepper. The cleaned kernels are salted, and put up in bottles, which sell at a good figure.

From South America comes the Butter-nut, which is of imposing size, and appearance; it is full of oil, and is much appreciated

by discriminating connoisseurs, who make it into delicious sandwiches. Again, Cocoa-nut butter is derived from Ceylon, being made entirely from the Cocoa-nut, tasting like oil, and never going rancid. As a substitute for butter many persons find this Cocoa-nut product quite satisfactory.

NUTMEG.

The tree (*Myristica fragrans*) from which our Nutmeg comes, occurs in the Molucca Islands, and the part of the nut which constitutes this spice is the kernel. "Nux Moschata" is given as a name to the Nutmeg (or Mugget, a diminutive of musk) because of its aromatic odour. *Mace* is the dried aril, or seed-covering of the Nutmeg, being when fresh of a beautiful crimson colour as a fleshy, net-like envelope, and very fragrant; it is used in cookery, and in pickles. There are three varieties of the Nutmeg—the male, or barren, the royal, and the queen; this last, a small, round Nutmeg, being considered the best. A volatile sweet-smelling oil is afforded by these nuts, in the proportion of 6 per cent, which oil is of a warming, cordial nature, very comforting for cold, languid indigestion, with flatulence and giddiness, but when given at all largely it is essentially narcotic. The oil distilled in Britain from Nutmegs is superior to foreign oil. Four Nutmegs have been known to completely paralyse the nervous sensibilities, producing a sort of wakeful unconsciousness for three entire days, with loss of memory afterwards, and with more or less lack of nervous power until after eight days. When taken to any excess, whether as a spice, or a medicine, the Nutmeg, and its preparations, are apt to cause some giddiness, oppression of the chest, stupor, and even delirium. A moderate dose of the oil is from two to four drops on sugar, for relieving dyspepsia with intestinal distension; or, better than this is the spirit of Nutmeg, made by mixing one part of the oil with forty parts of some spirit, and thoroughly shaking them together; half a teaspoonful of this Nutmeg spirit is a proper dose, together with half a wineglassful of hot water, and sweetened to the taste. Against diarrhœa, Nutmeg grated into hot water is very helpful, proving in mild cases an efficient substitute for opium. Old Gerarde says: "Nutmegs cause a sweet breath, and amend those that do stink; they are good against freckles, they quicken the sight, strengthen the

belly, break the wind, and stay the laske (looseness)." A drink which was concocted by our grandmothers for domestic requirements was Nutmeg tea; one Nutmeg (crushed) would make a pint of this tea, a small cupful of which would produce a sleep of several hours' duration, repeating the dose if needful. The sagacious dames used to carry a silver grater, and Nutmeg box, suspended from the waist, on their chatelaines. The nut contains starch, protein, and woody fibre, in addition to its stimulating soporific oil. Among *Rare Secrets in Physick and Chirurgerie*, (1653), it is advised as "another cordial, to take a preserved Nutmeg cut into four quarters; eat a quarter at a breakfast, and another in the afternoon; this is good for the head, and stomack." Perhaps of all aromatic conserves, preserved Nutmegs are the most delicious, and the best carminative for the intestines; but towards this purpose they must be prepared young, before the nut has begun to harden.

Mace oil is chemically identical with Nutmeg butter, or oil of Nutmegs. An infusion of Mace made with boiling water is a good warming drink against chronic bronchial cough, and moist bronchial asthma in an old person. Powdered Mace, in doses of from eight to ten grains, taken two or three times a day, proves beneficial against long-continued looseness of the bowels. Lately, after an Episcopal function in Chester Cathedral, the Bishop, on being asked by the Beadle if his Lordship required the Mace any longer, replied, much to that functionary's astonishment, "No; take it away, and put it in the rice pudding." The concrete oil, or "butter" of Nutmegs, is used in making plasters of a comfortable, stimulating sort, for the relief of rheumatic pains, or old sprains; likewise the spirit of Nutmeg is to be commended for rubbing in to recover paralysed limbs, as well as for chronic rheumatism.

OATMEAL.

For culinary medicine the Oat furnishes porridge, and gruel, as its most useful products. In its cultivated state this *Avena sativa* forms the principal grain food of Northern Europe. It needs less sunshine, and solar warmth to ripen its grain, than wheat does. But among the Romans of old it did not enjoy a good reputation. Pliny averred, "*Primum omnis frumenti vitium avena est.* Nevertheless, Oats are the most nutritious

of all cereals ; they are rich in proteid food, and in mineral salts, also they particularly abound with fat ; the unfortunate drawback to their easy digestion is partly because of a special constituent to which the name "avenin" has been given, (and which disagrees with many persons), partly, too, because the husk is so firmly adherent to the grain that it cannot be separated from the kernel except with much difficulty ; so that by the ordinary methods of grinding too great a proportion of cellulose is left in the meal, this occurring as small, sharp, irritating particles. If the person happens to have sluggish, insensible intestines, then the Oatmeal husk serves to stimulate them, and to obviate constipation ; otherwise it teases, and makes the lining membrane sore ; cracked-wheat porridge, or other forms of wheat for the purpose, will then suit better. Whereas the straw, leaves, and chaff of the Oat plant contain alkaline sulphates, these are absent in the grain, where phosphates of high nutritive value abound instead. Crushed Oatmeal is employed for making *gruel*, which has been fully considered here on a former page. Scotchmen say that in England the porridge is never sufficiently boiled, or properly cooked. Stale Oatmeal porridge is more digestible than any recently made, because acid-forming bacteria are developed which help to soften the cellulose. Rolling the Oats is a modern method of crushing the grain, and by great pressure rupturing the cell-walls so as to break down the cellulose, and flatten out the grains ; they then become more readily softened by cooking ; indeed, if heat accompanies this rolling process, then the grains will be found at the same time partially cooked. This plan not only has the advantage of facilitating the subsequent cooking for the table, but it further alters the fat (which is so plentiful in Oats) in such a way that it is less liable to turn rancid, or to impair the flavour of the grain. By mixing fine Oatmeal with an equal quantity of wheaten flour, a fairly good loaf can be made. But very little saccharine matter is contained ready formed in the Oat grain ; and this cannot make light bread, being therefore preferred when baked into cakes ; or its more popular form for eating is that of porridge, where the ground meal is thoroughly softened by boiling, and is improved in taste by adding salt, or sugar, with a little milk. "The halesome parritch, chief of Scotia's food," sang Burns with fervid eloquence. Scotch people revel in their parritch, and bannocks. "We defy your wheaten bread," says one of their favourite writers ; "your

home-made bread, your bakers' bread, your baps, rolls, scones, muffins, crumpets, and cookies, your Bath buns, and your Sally lunns, your tea cakes, and slim cakes, your saffron cakes, and girdle cakes, your shortbread, and sinning hinnies ; we swear by the Oat cake, and the Parritch, the bannock, and the brose." Scotch beef brose is concocted by boiling Oatmeal in meat-liquor, and kail brose by cooking Oatmeal in cabbage-water. In the Border-forays of the twelfth and thirteenth centuries all the provision carried by the Scotch warriors was simply a bag of Oatmeal.

"My blessing on the happy man
Who first rode in his carriage ;
And double blessing on the man
Who first invented parritch.

I'd build him up a monument
As high as any steeple,
His praise in future should be sung
By all good honest people.

Look round, and tell me where's the land
That flourishes sae weel
As where they duly fill the mouth
With Scotia's fragrant meal !

Whatever shape it may assume,
In scone, or havercake,
Or haggis, it is welcome, aye,
For dear auld Scotland's sake.

It nerves the heart, it nerves the arm
For deeds of noble darin' ;
When Boney met the kilted lads
'Twas then he got his farin'."

In the social life of Queen Anne's time, porridge was the Charity meat, which liberally-disposed persons sent for distribution on each Thursday, "when earthen dishes, porringers, pans, wooden spoons, and cabbage nets were stirring about against dinner-time." The porringer, or porridge dish, was a small vessel deeper than a plate, or a saucer, usually having upright sides, and a nearly flat bottom, also one or two ears. A familiar nursery rhyme relates that :—

"There was an old Bishop of Norwich
Who always ate beans with his porridge."

By the Danes "Fruit Porridge" is made : "Take one pound of red currants, and one pound of raspberries, or two pounds of the jam ; put these into a saucepan, with one quart of water,

and boil for one quarter of an hour. Strain through a sieve, and return into the saucepan, with a little lemon-peel, half a vanilla-pod, and a few shredded almonds, and sugar to taste. Add eight ounces of fine sago which has been well soaked in cold water, and stir all together over the fire until the sago is dissolved. Pour into a wetted mould, or glass dish, and serve with cream."

Oat-cake (cooked without butter in it) contains rather more than twice as much building material for the bodily repair as an equal quantity of wheaten bread, and has almost twice as great a fuel value. But the Oatmeal for cooking requires to be very thoroughly boiled, so as to sufficiently soften the cellulose. "Brose," which is prepared by merely stirring Oatmeal into boiling water, is not a proper food for delicate stomachs. The "Stir-about" of former English times was Oatmeal, and dripping, or bacon fat, mixed together, and stirred about in a frying-pan. With ourselves Oatmeal is frequently heating, and apt to provoke skin eruptions by its "avenin" principle, which is found not seldom to similarly affect horses when liberally supplied with Oats. Whereas porridge, though carefully prepared, disagrees with the digestion pretty often, yet it can be modified to prevent this: "Make a porridge of Oatmeal in the usual manner, but particularly thick, indeed, a pudding rather than a porridge; then, while it is still hot (at 150° Fahrenheit, or thereabout) in the saucepan, add some dry malt-flour (equal to from an eighth part to a quarter of the Oatmeal used); stir this dry flour into it, when a curious transformation will occur; the dry flour, instead of thickening the mixture, then acts like added water, and converts the pudding-mess into a thin porridge, much to the cook's astonishment."

When the husk has been entirely removed from Oats, then the result goes by the name of "groats"; or, if the grain has been crushed, Emden groats are thus obtained. Oatmeal will often make the bladder irritable, and urination frequent, with a copious deposit of phosphates in the urine on cooling; acid indigestion is further provoked, with disquieting fermentation of the food. As an offset, Oatmeal tea, given in small quantities, will sometimes counteract these troubles when occurring spontaneously. American doctors prescribe a tincture made from Oats with spirit of wine, as a remarkable nervine restorative, this being particularly helpful where a deficiency of nervous energy is the result of exhaustion, and is denoted by restlessness,

sleeplessness, and lack of vigour all round. A yeast poultice, made by stirring Oatmeal into the grounds of strong beer, is a capital cleansing and healing application, to languid, sloughing sores.

A useful food preparation for costive persons is "Oatmeal Parkin": "Take one pound of Oatmeal, a quarter of a pound of butter, one pound of treacle (the old-fashioned sort), a quarter of an ounce of pepper, the same of ginger, the same of crushed caraway seeds, half a teaspoonful of carbonate of soda, and a quarter of a teacupful of milk. Rub the butter into the Oatmeal; warm the treacle, and add it; also the rest of the ingredients; and lastly add the soda dissolved in the milk; then mix all thoroughly together. Grease a square tin, and into this put the mixture; bake for one and a half hours; and cut it when cold into squares."

"Porridge with Plums, and Turkey with Chine," said the *Art of Cookery* (1708). And in *Old Mortality* (by Sir Walter Scott) Mrs. Wilson pronounces, "They're gude parritch enough if ye wad but tak time to sup them: I made them mysell." For a porridge concocted of whole Wheaten meal, "take two tablespoonfuls of this meal, smoothly mixed with one teacupful of cold water; then put a pint of water into a saucepan; when it boils stir in the mixed meal, and boil for ten minutes, stirring all the time; next place the saucepan on the hob, and cook the porridge slowly for half an hour, stirring occasionally." This will agree with those persons who cannot take Oatmeal porridge without suffering discomfort, and indigestion afterwards.

Quite recently a leading doctor in London, who is a specialist in diets, has expressed himself strongly against Oatmeal for persons of poor digestive powers. He goes so far as to say, "I consider it the curse of Scotland, and the curse of every community which acquires a liking for it." There are two classes of persons who partake of Oatmeal,—those doing hard manual labour with bodily toil; and those who work with their brains, but do only little with their muscles. The first division, such as Scotch quarrymen, find Oatmeal a good enough article of food; but to the second division, the people who live in towns, and who work with their brains, and are troubled with digestive disturbances, Oatmeal is little short of a poison. The average town diet of meat, potatoes, and bread, will supply such consumers thereof with infinitely more proteid, and phosphates, than they can

obtain from Oatmeal, and with much less digestive effort. For Englishmen who attempt to eat Oatmeal, the immediate effect may be a feeling of such extreme satisfaction that no more food is felt to be wanted at the time, or for ever so long afterwards. During an hour and a half, or two hours, the sense of entire satiety continues, but then begins the presence of discomfort in the stomach, with the desire to keep swallowing saliva; moreover, there supervenes a feeling of false hunger, with disquietude; which series of symptoms, by repetition, becomes a chronic catarrh of the organ. Another disease, too, caused commonly by Oatmeal is appendicitis, or avenoliths (Oat-stones). Again, it is a fact that the eating of Oatmeal is also responsible for much drunkenness among the working classes, especially in Scotland, since Oatmeal, as all acknowledge, produces a dry mouth. What has been termed the "Boston stomach" is occasioned by Oatmeal in America, Canada, and Scotland; this has transformed many hundreds of healthy persons into martyrs to indigestion.

The "bap" takes the place in Scotland of the English roll at breakfast. It is a big, rather flat, spongy mass of flour and water, browned all over, being appetizing, and wholesome; whilst plain Oatmeal, turned sour after being first boiled, and jellied, is called Flummery. "Take a good handful of beaten Oatmeal, put it into a quart of water, and boil it half away; then strain it through a sieve, and let it stand by for future uses. In most cases it will serve better to thicken sauce than grated bread, or flour, or even than eggs;" so says *A Thousand Notable Things*.

"Meal-Monday" was an institution of Scotland whiles ago, when learning was really nourished there on a little Oatmeal. Then the students, before leaving their frugal homes for the Universities, provided themselves with a supply of Meal sufficient to make "halesome parritch" half through the Session. By the end of January their "Meal kists" had run low, and "a day off" was given them, on which the student was expected to journey half-way home, meeting at this point his parent, or brother, who had brought with him a second load of this simple fare. The holiday for such a purpose was fixed on a Monday, so as to allow the undergraduate the benefit of the Saturday preceding; since his journey would sometimes extend to fifty, or sixty miles. Nowadays the modern student goes home for "Meal-Monday" with a "week-end" ticket by rail

having no thought of the difficult, toilsome trampings of his ancestors. Sydney Smith and his associates, on first starting the *Edinburgh Review* (1802), proposed as its motto Virgil's well-known line from the first Æneid—"*Tenui musam meditamur avenâ*"—"We cultivate literature on a spare diet of Oatmeal." Carlyle, at Lord Ashburton's house, "The Grange," caught sight of Macaulay's face in unwonted repose as he was turning over the pages of a book. "I noticed," said he, "the homely Norse features that you find everywhere in the Western Isles, and I thought to myself, 'Well! anyone can see that you're an honest, good sort of fellow, made out of Oatmeal.'" Sydney Smith called Scotland "that garret of the earth, that knuckle-end of England, that land of Calvin, Oat-cakes, and Sulphur." During the Commonwealth, *Porridge* was the nickname given by the Dissenters to the Book of Common Prayer.

ODOURS, AND PERFUMES.

Sydney Smith declared: "God has given us wit, and flavour, and brightness, and laughter, and *perfumes*, to enliven the days of man's pilgrimage, and to charm his pained steps over the burning marle." That specific odours (fragrant, or the reverse) can exercise medicinal effects (particularly as regards meats and drinks) on the health of the body, is undeniable. Likewise (as stated elsewhere) this health can be "remarkably preserved by wholesome, fragrant dishes, and drinks from the garden of fruit trees, all the years." "Such are both alimentall, and physicall; they cure disease, and preserve health, discharging the body of the beginnings, and seeds of many diseases. This they do in severall respects: first, by the organs of the body; secondly, by the affections of the minde. The sweet perfumes of fruits work immediately upon the spirits for their refreshing; but meat, and drink act by ambages, and length of time. Sweet, and healthful ayres are speciall preservatives to health, and therefore much to be prised. Is the curative part of physick so worthy, and excellent as the preservative part? It's better to stand fast, than to fall, and rise again!" "Physicians," writes Montaigne, "might, in mine opinion, draw more use, and good from odours than they doe. For myselfe have often perceived that according unto their strength, and qualitie, they change, and alter, and move my spirits, and worke strange

effects in me, which makes me approve the common saying that the invention of incense, and perfumes in Churches, so ancient, and so far dispersed throughout all nations, and religions, had a speciall regard to rejoyce, to comfort, to quicken, to rouze, and to purifie our senses, so that we might be the apter, and readier unto contemplations. And, the better to judge of it, I would that I had my part of the skill which some cookes have who can so curiously season, and temper strange odors with the savour, and rellish of their meats! As it was especially observed in the service of the King of Tunes, who in our day landed at Naples to meet, and enter-parley with the Emperour Charles the Fifth. His viands were so exquisitely farced, and so sumptuously seasoned with sweet odoriferous drugs, and aromatical spices, that it was found upon his booke of accompt, the dressing of one peacocke, and two fesants amounted to one hundred duckets; which was their ordinarie manner of cooking his meats. And when they were carved up, not only the dining chambers, but all the roomes of his Pallace, and the streets round about it, were replenished with an exceeding odoriferous, and aromaticall vapour, which continued a long time after."

Quite of late Dr. Forbes Watson, in *Flowers and Gardens*, has remarked when writing about the Cowslip, that "its fine scent recalls the sweet breath of the cow,—an odour which breathes in conjunction with cows as they sit at rest in the pasture, and which is believed by many, perhaps with truth, to be actually curative of disease." To the same effect Mrs. Catherine Crowe (in *The Night Side of Nature*, 1848) has reminded us that "the disturbing effects of odours on some persons, which are quite innoxious to others, must have been noticed by everybody. Some people do actually almost die of a rose in aromatic pain." It has been pertinently, though coarsely observed, that "each man's own bed does not smell strong to himself, because he is accustomed to its characteristic odour. Neither does a tallow-chandler smell those horrible, and pernicious fumes that old tallow sends forth when it is melted. But let any other person who is not accustomed thereto be near such things, and they will prove highly offensive." Statistics compiled from reports of inspectors of scent factories, as well as experiments made upon some of the lower animals, especially frogs, have proved of late that not only the stronger scents, but even the more subtle, and delicate perfumes of fragile flowers, are capable of

producing fatal effects even upon man. The power of odorous blossoms is not only exerted through the nose and lungs, when the scent thereof is inhaled, but where the air is heavily charged with perfumes, as in a closed room at night, the whole skin is capable of absorbing to some extent the vapour, which has a decidedly benumbing effect upon the nervous system at large. A vase full of Easter lilies (Arum, or "Gethsemane," from its blood-red spots,) is quite sufficient to cause extreme distress to those who are weak, or especially sensitive to such subtle mysterious influences.

"These are God's Easter lilies,
They grow at Passion-tide,
They are the Angels' trumpets,
Whose harps are laid aside.

White-throated Arum lilies,
Through you the news is borne;
The blare of Easter bugles,
The shout of Easter morn!"

"There is one class of women," says a recent writer, "who must perforce forego the perfume, and beauty of flowers,—eschew them as they would poison,—and these are the singers. Any flowers of strong fragrance have an immediate effect upon the voice, particularly violets." "A Violet-scented atmosphere," it is observantly suggested, "makes those persons who are surrounded by its influences, religious, affectionate, and peace-loving." Women of lovable nature are always fond of Violet perfume. Again, the fragrance of Roses finds its admirers among warm-hearted, imaginative beings; whilst that of Heliotrope has its devotees among persons of dainty, neat, and rather unassuming dispositions, who dislike fuss, or notoriety. Lord Bacon commended the lifting a turf or two in your garden-walks, and pouring into each of the spaces a bottle of Claret, so as to "recreate the sense of smelling, this being no less grateful than beneficial."

Boyle said that in his time many physicians avoided giving drugs to children, having found that external applications to be imbibed by the skin, or by respiration, were sufficient. Sir Charles Bell told me that Mr. F., a gentleman well known in public life, had only to hold an old book to his nose to produce all the effects of a cathartic. Elizabeth Okey was oppressed with most painful sensations when near a person whose frame

was sinking. "Whenever this effect was of a certain intensity Dr. Elliotson observed that the patient always died."

The famed perfumes of the East were first brought into Western Europe by the Crusaders; and no treasures were more valued by the mediæval lady than these, for it was thought that the atmosphere of fragrance in which Oriental women lived was the means of preserving their beauty. But the use of perfumes was not common in England until the time of Queen Elizabeth; it is probable that they were then introduced from abroad by the Earl of Oxford. Immediately, these cosmetics and fragrances captured the fancy of the Queen, and her ladies, so that their use spread through the island. Not even in Egypt were perfumes more costly, or more popular than during her time. In the bedrooms of ladies of fashion sweet candles were burned; odorous cakes were thrown into the fire in order to fill the air with fragrance; cosmetics were kept in costly scented boxes; coffers containing perfumes were suspended about the rooms so as to gradually give out their sweetness; a kind of scented lozenge was used to perfume the breath; and one of the most popular devices was the scented glove. Nowadays recent science is returning to the old belief, that scents and perfumes exercise medicinal health-giving properties. "Perhaps," says one modern doctor, "the Orientals were not wrong in claiming that the sagacious employment of scents enhanced beauty, and prolonged life." Dependent thereupon is the self-protective principle which so many Eastern plants and herbs employ, by diffusing around themselves a vaporous aroma of volatile scent which repels the tropical solar rays; so, likewise, it was a former custom, now explained by science, of warding off infection by placing Rue before the Judge when prisoners came into court straight from foul dens; as also at funerals by carrying Rosemary against possible harm from the corpse; or, again, of keeping linen sweet by storing Lavender therewith; as well as by reviving a faint person with the smell of burnt feathers, and by nullifying a catarrh of the head with antiseptic smelling salts.

It cannot be doubted that most animals are endowed with a keen and subtle sense of smell, much in advance of that which the majority of persons can exercise. But, none the less, training will marvellously improve the human faculty of smell; for instance, Oil of Cloves can be detected with one part in eighty-eight thousand of water by trained men; as likewise

the peculiar odour of prussic acid in a solution containing one part in two million parts of water, which no chemical test could detect. Again, the tenth part of a grain of musk will continue for years to fill a room with its odoriferous particles, and at the end of that time will not be appreciably diminished in weight by the finest balance. Still more acute is the sense of smell in the semi-savage man. The aborigines of Peru can, in the darkest night, and in the thickest wood, distinguish respectively a white man, a negro, and one of their own race by the smell. Much have we gained by civilization, but not without some loss to our bodily senses, and energies. Man seems to become less acute and delicate in the sense of smell, as he fares more abundantly, and lives more at ease.

The essential oil of Cedar (*Abies cedrus*) is a delightfully fragrant antiseptic; about which tree, says Evelyn, "its wood resists putrefaction, destroys noxious insects, continues sound a thousand years, or two, yields an oil famous for preserving books, and writings, purifies the air by its effluvia, and inspires worshippers with a solemn awe when used in wainscotted churches." Again, it is of proved service to burn Incense (*Pulvis thuris comp.*) in a patient's room for arresting septic catarrh, as on an access of influenza; this remedial antiseptic method was practised far back, in the days of Solomon. Similarly, with some individuals distress is occasioned by the exhalations, so subtle as to be imperceptible by others, of a cat in the room, of drugs in the air of a chemist's shop, and of numerous recondite instances of the same kind. Tennyson has told of the personal effect produced by a use of scent even on the moral character :—

> "That oil'd and curl'd Assyrian bull,
> Smelling at once of musk, and insolence."

Animals, too, are fascinated almost to intoxication by scents, as the domestic cat by the Valerian plant, as well as rats by its roots, which they grub up. It has been suggested that the Pied Piper of Hamelin may have carried one of these roots in his pocket. Valerianic odours first stimulate the spinal cord, and subsequently lower its sensibility. Musk (an animal secretion from the Musk-deer of China, and Thibet) is a powerful cordial, and a very durable perfume; a few grains of it will retain the characteristic odour for years. In Henry the Fifth's time Musk-balls, made of gold, or silver gilt, were carried

remedially about the person. This scent has a decidedly stimulating sexual effect. Hempel tells of a robust man recovering virile powers (lost for four previous years through a severe chill) by grinding up Musk for his employer. The perfume of the Civet Cat (*Viverra civetta*) has a like effect. In aged persons attacked with inflammation of the lungs, leading to rapid exhaustion of the strength, with threatened heart failure, Musk is of splendid service, though of itself a costly medicament. The old physicians used from nine to twelve grains of genuine Musk made up in the form of a mixture, with syrup, and mucilage of gum, giving frequent doses according to the urgency of the case, and obtaining therefrom very excellent results.

The most famous manufactory of Perfume in the world is a little old-fashioned building in Warwick Street, London,—the Royal Perfumery of Messrs. Bayley & Co.," who invented the famous Ess Bouquet, as used by George the Fourth at a State Ball; their flower farm is at Byfleet. Deer fat, or purified beef suet, is melted by steam, then the picked flowers are immersed therein for forty-eight hours; the fat is strained off from these, and fresh flowers are substituted in it, repeating the process often enough for the fat to have absorbed sufficient "otto"; alcohol is next added, and the fat is cut up into fine flakes; the perfumed volatile liquid is afterwards distilled off. The best Roses which can be had come from Roumelia, and Bulgaria. Ambergris is the earliest scent which was known. The King's favourite perfume is Ess Bouquet, which is actually an essence of many flowers wonderfully blended together. As to scents, the majority of them can be now made artificially from coal tar; the perfume, and even the colouring matter of the flowers, which are poetically supposed to form the basis of the various scents, are now easily reproduced chemically from this coal tar, and its aniline dyes. In fact:—

"The flowers that bloom in the spring, tra-la!
Have nothing to do with the case."

Such sweet scents as Acacia, Attar of Roses, Lavender, New-mown Hay, Wood-violet, Aroma of Apple and Pear, also many other perfumes, are readily produced; also for flavouring uses Vanilline crystals are to be made from coal tar, instead of being got from the costly Vanilla bean, the chemical constituents of both being identically the same.

OILS.

For medicinal effects several oils are used in a culinary form, whether animal, or vegetable, fixed, or volatile. Likewise certain animal oils can be beneficially rubbed into the skin of persons wasted through long illness, or atrophied by defective nutrition. Neatsfoot Oil, from the heifer, is admirable for such a purpose. Thomson tells in his *Seasons* about

> "A little, round, fat, oily man of God."

Neat are cattle of the bovine genus taken collectively, as oxen, bulls, cows, and calves. Shakespeare, in the *Winter's Tale*, says playfully :—

> "We must be neat; not neat, but cleanly, Captain!
> And yet the steer, the heifer, and the calf
> Are all called *neat*."

And again, in *Julius Cæsar* :—

> "As proper men as ever trod upon
> Neats' leather have gone upon my handiwork."

Another such animal oil is "Trotter Oil," obtained by boiling down the feet, or trotters, of sheep, or calves. The closer the similarity between the fats, or oils, taken as food, and the fat of a person's body, the more readily is the dietetic fat or oil absorbed, and utilized for the bodily wants. Sir Henry Holland advocated the practice of anointing the harsh, dry skin of dyspeptic patients with warm oils, those of a bland animal sort being preferable for the purpose. The yolk of egg, the livers of poultry and fish, and the brains of animals, all abound in oily matter. Gilbert White tells that oil is extracted from Cockchafers in Kent by boiling these creatures, which are collected by the labourers with such view. Cod-liver Oil is universally known, and valued as a typical fatty aliment for consumptive persons, in whom the waste by hectic fever, and often by other bodily losses, is excessive. All the vital constituents of bile are comprised in Cod-liver Oil; but the essential curative action thereof is due to a subtle force residing in its inmost centre, the "very principle, and factor of life." It may be better relished if some catsup is mixed with the oil, or some Liebig's Extract of Meat. Iodine, lecithin, and bromine are constituents of this oil, together with glycerine, resin, margaric acid, therapine, oleic acid, coleine, salts of lime, potash, and

sodium. It is of great service as a food likewise in scrofulous affections of children, and for banishing all strumous diseases of the skin. Only "medicine oil," as it is termed in Norway, should be used, which is extracted reliably from the fresh livers which are pressed without stewing; it pertinaciously retains a fishy flavour, and (together with some other fish oils) embodies a considerable amount of cholesterin, which is a particular alcohol concerned in bile-making, (and to be perhaps therefore suggested curatively for restoring glycogen-producing energies to the liver in diabetes). This occurs also in the fat of certain land animals.

An agreeable, and at the same time beneficial, form of fish oil, as a food, is embodied in the contents of the Sardine box now in such general use. Genuine Sardines from the Mediterranean, as imported from Spain, Portugal, and France, are often small pilchards (*Clupea pilchardus*). The Californian Sardine is *Clupea sagax*. These delicate fish must be as fresh as possible when first handled; they are beheaded, and gutted, and allowed to remain on wooden slabs overnight after being slightly salted; next day they are salted again, and allowed to dry; they are then cooked in olive oil, and put into wire baskets to drip. The cooking is a nice process; if it is overdone the scales come off; five, or six minutes suffice for the cooking. When they have become cold the fish are placed on tables to be arranged in boxes amid oil dipped from the barrels; this oil is worth more than the fish, therefore they are packed as close as possible; the boxes are then soldered down, and they are cooked a second time by steam. Small Sardines are the most prized. Occasionally a red coloration of the Sardines preserved in oil may be discovered, this being due, it is said, to a chromogenic bacillus which is then found in large numbers on these Sardines before preservation: it is not at all harmful. Long ago, in the *Treatise of Gonzalo Oviedo* (1535), occurred the record: "When the sayd increasyng of the sea commeth, there commeth also therewith such a multitude of the smaule fyshes cauled Sardynes that no man wolde beleve it that hath not seene it." The preserved Sardine is said to have been brought into fashion by Henry the Fourth; this delicate fish has been termed the "Manna of the sea." If properly prepared, and not with too much salt, the longer the tin of Sardines is kept unopened the more mellow do the fish become. Without doubt a good many sprats are put up in tins with oil as

Sardines. The abundance of oil, together with incorporated fish-products, make Sardines especially suitable for consumptive patients, also for diabetic sufferers, and for other wasting illnesses, provided the digestive powers do not rebel. The small fish are nicest for eating, and are appreciated best by delicate appetites; thus "the lawyer may find a feast in a box of Sardines, with some biscuits, while the field labourer would look with contempt on such food, and would eagerly turn therefrom to fat pork, and cabbage." "Sardines can supply to the brain-worker the material he needs; likewise the pork and cabbage to the labourer, the heat and energy which he expends." Mr. Dunn, of Mevagissey, in Cornwall, first proposed the preparation of Sardines in this country, but for a long time they were not very popular. Only sixty years ago, a grocer in Brighton had a small quantity on hand for three years, without being able to find a purchaser for them. It was ordered in the first *London Pharmacopœia*, 1618, "for use among the poor," that oil of Swallows (*Oleum Hirundinum*) should be employed externally for the cure of rheumatism. This oil was to be made by boiling down young Swallows in oil, together with certain herbs, wine, and May butter. It was ordained with the hope that the stiffened and distorted joints of sufferers would be thus made as lithesome as those of the Swallow or Swift.

Of vegetable Oils, that supplied by the Olive is a capital substitute when butter disagrees; it is slightly laxative, and being mixed in a salad it obviates flatulency. Castor Oil is a favourite adjunct to the Egyptian salads; this was relished taken with other foods in the times of the Pharaohs. The oleic acid of Olive Oil is a powerful solvent of the fæces if injected into the lower bowel. Dr. E. Moraweck, of Austria, when asked by an English physician, on behalf of a patient suffering from gall-stones, what remedy he chiefly used for this trouble, advised Olive Oil before all other medicaments. Accordingly a full dose thereof was administered, and two days later a handful of gall-stones was passed. Genuine Olive Oil is expressed from the pulp of the common Olive, being, when fresh and good, an inodorous, insipid, pale yellow, or greenish-yellow, viscous liquid, unctuous to the feel, inflammable, not capable of combining with water, and nearly insoluble in alcohol; it is the lightest of all the fixed oils. Virgin oil runs spontaneously from the Olive pulp, and is superior to the expressed oil, which is more

or less turbid, and coloured, having to be stored for a time so as to deposit its impurities, and become clear. Nowadays most of the so-called Olive Oil is really Cotton-seed Oil purified. For Olive Oil a proper mild temperature is essential to keep it good. If frozen in the flask during winter, it must not on any consideration be placed near the fire, or in a heated room, because a forced temperature will turn any such oil rank; it should be put for thawing into warm, not hot, water, after first drawing the cork. In cases of ulcerated stomach, or contraction of its further outlet (the pylorus), a wineglassful of Olive Oil taken before meals will prevent the severe pain which otherwise follows on eating; and with most patients the accompanying dilatation of the stomach disappears completely. From eight to nine ounces should be thus taken in all every day. In two instances this plan of treatment, when tried as an absolutely last resource before operation, yet proved successful; and the patients, who had become reduced to a shadow, began forthwith to regain flesh, insomuch that within two months they were almost cured. Among young men training for athletic contests, rowing, etc., the unusual stimulation of the sweat ducts by increased active exercise sometimes induces boils, when the best preventive is to anoint the skin with a little sweet (Olive) Oil after the morning bath. This is, moreover, a capital resolvent. Both Olive Oil, and Cocoa butter, are as capable for affording nourishment as are the fats of meat, and milk. Cocoa butter ccntains less water than true butter, and will keep for fifteen or twenty days without showing any acid reaction: therefore it is specially useful for making pastry. The same has been found experimentally an admirable antiseptic against infection by microbes, insomuch that the several Boards of Health sanction its use. Formerly an old custom obtained to dip cutting surgical instruments into oil before incising the flesh.

If occasion arises when a dose of Castor Oil seems to be incontestably needed, and more appropriate than aught else for the purpose in view, an ancient method of giving this under the guise of palatable food is well worth knowing. Mix a slice or two of well-browned toast, or pie-crust, with some strong meat-extract, or gravy; add pepper, salt, and herbs, and heat the whole so as to produce an aromatic, and flavoursome dish; then mingle your dose of Castor Oil therewith (choosing the tasteless sort), and administer the combination at a hungry

moment, without revealing its medicinal character, but merely describing it as a meat dish which the doctor has ordered. By the adoption of this plan a patient may, without knowing it, be induced to take Castor Oil with avidity, and to declare between the mouthfuls that such Oil (which has been perhaps previously suggested, and refused with aversion) is one of those disgusting things which he never could, and never will take! Carlyle called Castor Oil "the Oil of Sorrow."

With regard to the Parable of the Good Samaritan in the New Testament,—pouring Oil and wine into the wounds of the traveller by the wayside,—it has been pointed out that the words of the text signify "he bound up his wounds, pouring *on*, not *in*, 'Oil, and wine.'" In other words, as the Good Samaritan applied the bandage he kept pouring Oil upon it, to make it remain soft, and prevent it from stiffening, while adding wine to stimulate, and cleanse the parts. Such (as we know from Galen) were the recognized therapeutics of the past; whilst more than a century later on a paste combining these two liquids was a popular pharmaceutical preparation. Friction of old bruises, and painful chronic swellings, with Olive Oil, in conjunction with some warming spirit, is a long-established domestic remedy. In the peasant speech of Devon, where swollen neck-glands are called "waxing curls," one may hear it said: "Aw, poar little blid; 'er idden very well; 'er waxing curls be down, an' I've a bin rubbin' um back wi Arts'orn an' Oil."

Olive Oil is the best medium for frying, at about 350° Fahr$^{t.}$, suddenly plunging the substance into the pan of boiling oil, and leaving it there for three, or four minutes. This process differs entirely from the usual so-called frying, in which the fat is regarded merely as a means of preventing the substance from adhering to the surface of the shallow pan. True frying produces an instantaneous coagulation of the albuminous proteids on the surface, so that any escape from within of soluble substances is thus hindered, whilst the outside temperature is so high (as with fish, for example) that the food is practically cooked throughout its whole thickness almost immediately. At high temperatures some inferior fats develop fatty acids, which are trying to a feeble digestion.

An English citizen was being conducted round the galleries of the White House, New York, by an American gentleman, to whom he remarked, "What a large number of portraits

you have here!" "Yes," said the guide, in a dry, matter-of-fact way, "in America we generally put our men of note in oil," speaking just as if they were tinned Sardines.

By the first *London Pharmacopœia*, 1618, an Oil of St. John's Wort (*Hypericum perforatum*), was ordered to be made. It possesses a specially beautiful red colour. This oil prepared from the plant-tops is highly useful for healing bed sores and ulcers. It has a particular virtue for allaying spinal irritability if rubbed into the back bone. The flowers when bruised between the fingers yield a bright red juice, so that the herb has obtained the title of (*Sanguis hominis*,) human blood. Furthermore, it is "*Medicamentum in mansâ intus sumendum*" to be chewed for its curative effects.

As supplementary to the commendation of Cod-liver Oil specifically for consumptive patients, some facts respecting the open-air treatment recently brought by physicians into universal vogue (as promising to altogether eradicate this dire and destructive disease, especially from among young persons having proclivities thereto), may be usefully brought under notice. The main *ratio medendi* of open-air treatment for consumptives depends on our present positive acquaintance with the bacillus which denotes tubercular consumption, and reveals itself in the sputa (phlegm, and spittle) of the infected patient; together with proofs incontestable that abundance of fresh, open, cold, dry air, by day, and by night, with plentiful sunshine, and generous food, even almost to excess, serve to exterminate this tuberculous bacillus. Nevertheless, so happy an issue during the individual lifetime, or experience of one generation, is only to be made sure of in cases of acquired consumption, without a deep-rooted, inherited tuberculous bias of longer inheritance, which is defiant of sanative expulsion by any such speedy, and plausible means. "The medical mind," as Dr. Pearse, of Plymouth, sagaciously admonishes, "is too much exercised about a bacillus as the cause of consumption, overlooking the great biological, orderly, wide, and profound correlations of this disease,—correlations which extend back often to many generations, whilst involving structure, and function." Bitter must as yet be the disappointments of many too hopeful victims, and of their over-sanguine friends, because of ingrained tubercular seeds, virulent enough to withstand a series of lives, before being totally vanquished by science and

open air. All that can be patiently accomplished by the enlightened measures now under pursuance by skilled doctors, on extending lines, is to rescue the large body of consumptive sufferers in whom the disease has been personally acquired, and not inherited through innate tubercular propensities; whilst more slowly changing the whole constitutional existence of others, as yet beyond curative reach except by degrees throughout more than one lifetime. As to the methods, and prosecution of open-air treatment, sanatoriums for the purpose, in suitable positions *on high ground as essential*, are now multiplying under properly organized supervision. Their experience is as yet somewhat crude, yet on the whole convincing. Sir Thomas Barlow has said in a medical address (1902) at Manchester: "I believe it will be found that children are more tolerant of exposure to open winds than adults are; and the importance to healthy children of passing a great part of the day in the open air has been gradually apprehended by the rich; whilst the poor have been *compelled* to learn it as a rough lesson by their own conditions; but neither rich, nor poor, yet appreciate how large a slice of the twenty-four hours in every child's daily life is passed in the bedroom. The traditional fear of air, and of wide-open windows, which is perhaps a survival of ancient malarial experience, has still to be unlearned in this country of ours." Again: "The test of a climate suitable for a consumptive to winter in is not the mean height of temperature, nor even the absence of extremes, but the number of available days for getting an appetite by air and exercise, under the open sky"; so taught Dr. King Chambers as long ago as 1876. Likewise, "in springtime the sunshine compensates for a good deal of cold, although perhaps much actual warmth is not then felt from its rays, for there is scarcely any warmth in the *chemical* rays of the sun,—those rays which stimulate plant life, and animal life, yet are highly destructive to the microbes of disease. It is a significant observation that in April, and May, despite the cold winds which may prevail, the actinic power of the sun's rays reaches a maximum. At no other time in the year, not even during the hot days of July, and August, are the health-giving rays of the sun so intense as in spring. Certain chemical compounds prove to be more readily disintegrated, and at a quicker rate, in April and May, than in any other months of the year. Quite a considerable number of chemical salts give

greater evidence of the disturbing action of light in the spring than at any other season; and nature herself responds to this quickening impulse, for growth is greatest, and most vigorous when the chemical activity of the sun's rays is highest; and that is, of course, in the spring." The vital processes, as concerning recovery from, or yielding to morbid states, are specially influenced by the atmospheric conditions of spring-time; notably consumptive persons are reputed capable of resisting the advance of their disease if they surmount the month of May. Tennyson, who was a faithful observer of natural operations, gives heed to this vernal influence in his touching poem, *The May Queen*:—

> "All in the wild March morning I heard the Angels call,
> And in the wild March morning I heard them call my soul."

Furthermore, the early morning air contains more ozone than that of mid-day, which fact is to be explained by the electrical action of the dew for an hour or more after dawn, with an increase of peroxide of hydrogen beneficially, than in air later in the day. Dew is probably of vital importance to the well-being of both patients, and animals, to a greater extent than is known; and the beautiful expression in our Prayer Book, "Pour upon them the continual dew of thy blessing," may be specially remembered in this connection. "*Itineris matutini gratiam accipimus.*" Charles Kingsley when away from his living at Eversley, 1849, for recovery after a severe illness, wrote home thus: "a tremendous gale of wind has acted on me exactly like Champagne, and a Cathedral organ combined in one." "'Anythink for air and exercise'" (exclaims Sam Weller, in *Pickwick*), "as the wery old donkey observed ven they voke him up from his death-bed to carry ten gentlemen to Greenwich in a tax-cart."

During the first century of the Christian era, Celsus prescribed for combating consumption in certain cases the process of *gestation*, or mild shaking of the body. A modern physician now instructs thus: "I have been very much struck by the beneficial effects following a motor-car drive of from thirty to forty miles. Along with a feeling of marked exhilaration, an increased appetite, and improved sleep, there is a heightened healthy glow, which after a few days' prolonged treatment tends to become permanent. Also the disposition to cough is (in a consumptive patient) much

diminished. I would, therefore, suggest to those in charge of sanatoria the advisability of combining a daily run on a good motor-car, at a pace fully up to the legal limit, with the ordinary open-air treatment. The patients should be placed in front of the car, so as to avoid inspiring dust which may be thrown up by the wheels." This may be taken to represent the *gestation* of Celsus, "up to date." Sydney Smith declared about the Scotch friends who visited him in Somersetshire, and found its climate enervating, that "they were but Northern barbarians after all, who like to breathe their air raw; we civilized people of the South prefer it cooked."

ONION. (*See* GARLIC).

THE chemical constituents of an Onion-bulb are an acrid volatile oil, sulphur, phosphorus, alkaline earthy salts, phosphoric and acetic acids, phosphate, and citrate of lime, starch, sugar, and cellulose. Onion juice becomes of a rose-red colour when exposed to the air; it contains sugar, and will therefore ferment, even until yielding alcohol; the outer harder coats contain oxalate of lime. The Onion was long believed to specifically prevent the intoxicating effects of alcoholic drink, and to dispel its evil consequences. The large Spanish Onion is rich enough in nutrients to be regarded as a food. American growers have developed the same into the big, silvery-looking, gleaming white Onions on sale in the markets, which are still called Spanish, though they have in fact been no nearer Spain than the New England States, or New Jersey. These Onions are so mild and tender, that anyone can eat them when boiled, or stewed, without ill-effects; they are said to induce a pleasant desire for sleep. A labourer in Spain will munch an Onion just as an English rustic does an apple. The Spanish Onion, grown largely in Portugal, cannot be acclimatized in England: it soon degenerates with us. Dishes which contain Onions in any quantity, or are strongly flavoured therewith, are said to be cooked "*a la Soubise;*" the name being supposed to come from Prince Charles Soubise (1750), who was a famous epicure Field-marshal during the reign of Louis the Fourteenth of France. Another classical appellation of the Onion is "*Cepe;*" which schoolboys take advantage of for their puzzle line, "*Sæpe cepi cepe, sub sepe.*"

Onions are helpful against constipation, by reason mainly of

their abundant cellulose, which gives intestinal momentum. Many persons are led to think that these, in common with the leek, and garlic, are of service against fatigue from such prolonged exercise as is entailed by hunting, shooting, etc., and subsequent feasting. For bronchitis it has proved of use to apply repeatedly over the chest a good-sized Onion, beaten into pulp, within a flannel bag, each application being for four hours. A syrup made from the fresh juice of raw Onions, with honey, is an excellent medicine for old persons troubled with phlegm in cold weather, when the air passages are stuffed, and free breathing is hindered. Raw Onions increase the flow of urine, and promote free perspiration, insomuch that a diet of them with bread has many a time dispersed dropsical effusions caused by a chill, with arrested circulation in the kidneys, and skin surface. The volatile principle which benefits in this stimulating manner is sulphide of allyl, an acrid salt. The chief internal effects of these, and their kindred bulbs, are increase of warmth, and of circulatory vigour; so that they are better adapted for patients of a cold temperament, and sluggish energies, than when the system is feverish, and the constitution ardently excitable. "*Vous tous qui etes gros, et gras, et lymphatiques, avec l'estomac paresseux, mangez l'oignon cru; c'est pour vous que le bon Dieu la fait.*"

A jorum (or earthen bowl) of hot Onion broth taken at bedtime will serve admirably to mollify the air passages, and to open the skin-pores, after the first feverish stage of catarrh, or influenza, has passed by. To make this, peel a large Spanish Onion, and divide it into four parts; put them into a saucepan with half a saltspoonful of salt, and two ounces of butter, also a pint of cold water; let them simmer gently until quite tender; next pour all into a bowl which has been made hot, dredging a little pepper over; and let the broth be taken as hot as it can be borne. The allyl, and sulphur in the bulbs, together with their mucilage, relieve the sore, raw mucous membranes, and exercise a specific medicinal virtue which they possess for cure, as has been conclusively shown by experimental provings. Onion gruel is similarly an excellent, and delicious posset for a catarrhal patient, this being made of either water, or milk, and proving smooth enough for any palate if patent groats are used. The Onion should be three-parts cooked in the water, and finished in the gruel. For a full-flavoured gruel English Onions

should be used; or, for a mild gruel, Portugal, or Egyptian Onions. Some persons prefer to boil them the whole time in the liquid for the gruel, thus retaining certain properties which are anti-asthmatic. If butter is liked, add a morsel of the freshest, off the fire, or a spoonful of cream instead. *Onion milk* is a time-honoured remedy for a similar purpose, and is to be prepared in the same way, adding a clove, a morsel of mace, or a little whole allspice, to simmer in the milk; this beverage to be served quite hot. But, after all, cold-catching can be prevented beforehand, which is far better than having necessary recourse subsequently to these palliative measures. A white-haired old travelling tinker, hardy and hearty, testifies thus, for instance: "Sometimes one of the Deacons says to me when he sees me outside o' th' Chapel i' th' yard, athowt mi yed covered, 'Aw wish aw could stand i' th' wind an' rain athowt mi hat on, athowt catchin' cowld, Sam, as yo' can.' An' says aw to him, 'Th' mon as wears flannel next his skin, an' as dips his yed under cowld water three times every mornin', doesno catch much cowld; aw've seen eighty-two buthdays, and, thank the Lord, aw hanno' got a pain, or a ache about me."

If employed as a poultice for ear-ache, or for broken chilblains, the Onion should be plainly roasted, so as to modify its acrid oil. When there is a running fetid discharge from the ear, or when an abscess is first threatened, with pain, heat, and swelling, the hot poultice of roasted Onion will be found very soothing, and will do much to mitigate the pain; or, a clove of Garlic, stripped of the outer skin, and cut in the form of a blunt cone, if thrust gently into the ear of the aching side, will quickly assuage the pain. "Onyon juice," saith an old maxim, "anoynted on the bald head in the sun, bringeth the haire againe very speedilie." For inflamed, and protruding piles, the raw Onion pulp of a bruised bulb will, if kept bound close against the part by a compress, and renewed as needed, afford certain relief. Small Onions eaten at night by those persons who are not prone to feverishness, will promote sleep, and induce a gentle perspiration. The late Frank Buckland said: "I am sure the essential oil of Onions has specific powers; in my own case it never fails; if I am much pressed with work, and feel that I am not disposed to sleep, I eat two or three small Onions, and their effect is magical."

The juice of a sliced raw Onion, being alkaline, will

quickly antidote by its application over any part, the acid venom from the sting of a wasp, or bee, and will afford speedy relief. The Onion has a very sensitive organism, and serves to absorb all morbid matter that comes in its way. It has been found that during an epidemic of cholera, a string of Onions hanging in a house amid other houses which were all infected, became unintelligibly diseased, and black, but proving thereby protective to the inmates of that particular house. Culpeper tells about Onions: "They have gotten this quality, to draw corruption unto them, for, if you pill (peel) one, and lay it on a dunghill, you shall finde him rotten in half a day, by drawing putrefaction to it; then being bruised, and applied to a plague-sore, it is very probable it will do the like." The volatile principle of the bulbs, which is sulphide of allyl, is powerfully antiseptic whilst they are raw, but when boiled they lose their odorous essential oil in a great measure, on which the anti-putrefying virtues depend, and which escape by the heat.

A favourite Devonshire pie whereof the predominant flavour is that of the savoury Onion, is made thus (being best adapted for the "*dura ilia messorum*"): "Take as ingredients three pounds of mutton, a pork cutlet, six large apples (sliced), plenty of finely chopped Onions, two ounces of sifted sugar, half a pint of mutton broth, with pepper and salt to taste. Place these in layers within a deep dish; cover with rich paste, and bake for an hour and a half; or place the whole in a crock, and stew for an hour and a half; serve piping hot. Sometimes clotted cream is eaten with this light, wholesome delicacy." "As to fair Italy, all the social atmosphere of that delightful land is laden with the fragrance of the Onion; its odour is a practical democracy. In the Churches all are alike: there is one faith, one smell! The entrance of Victor Emmanuel into Rome was only the pompous proclamation of a unity which garlic had already accomplished; (and yet we who boast openly of our democracy eat Onions in secret)."

The author of *My Summer in a Garden* says: "I am quite ashamed to take friends into my garden, and have them notice the absence of Onions: it is so marked. In 'Onion is strength,' and a garden without it lacks flavour. The Onion in its satin wrappings is among the most beautiful of vegetables, and it is the only one which represents the essence of things; it can almost be said to have a soul. You take off coat after coat,

and the Onion is still there; and when the last one is removed, who dare say that the Onion itself is destroyed? though you can cry over its departed spirit! If there is any one thing on this fallen earth that the angels in heaven weep over more than another, it is the Onion. I know that there is supposed to be a prejudice against the Onion, but I think there is rather a cowardice regarding it. I doubt not that all men and women really love the Onion, but few dare to confess their love; the affection for it is concealed; good New Englanders are as shy of owning it as they are of talking about religion. Some persons have fixed days on which they eat Onions,—what you might call 'retreats,' or their 'Thursdays'; the act is in the nature of a mystic ceremony, an Eleusinian rite; not a breath of it must get abroad; on that day they see no company; they deny the kiss of greeting to the dearest friend; they retire within themselves, and hold communion with one of the most pungent and penetrating manifestations of the moral vegetable world. Happy is said to be the family which can eat Onions together; they are for the time being separate from the world, and have a harmony of aspiration." "Let the reformers then become apostles of the Onion: let them eat it, and preach it to their fellows, and circulate tracts of it in the form of seeds! In the Onion is the hope of universal brotherhood. If all men will eat Onions at all times, they will come into a universal sympathy." Again, in the eloquent words of another writer: "The fragrance of this wine-scented esculent not only whets the appetite, but abounds in associations glad, and picturesque. All Italy is in the fine penetrating smell, and all Provence, and all Spain. An Onion or garlic-perfumed atmosphere hovers alike over the narrow Calli of Venice, the cool Courts of Cordova and the thronged Amphitheatre of Naples. It is the only æther breathed by the Latin people of the South, so that ever must it suggest blue skies, and endless sunshine, cypress groves, and olive orchards. For the traveller it is interwoven with memories of the golden canvases of Titian, the song of Dante, the music of Mascagni. The Violet may not work a sweeter spell, nor the Carnation yield a more intoxicating fragrance. Sometimes even yet when I enter a London restaurant, however pretentious, an aroma arises of the *Allium sativum*, from a sauce, and I am back straightway on the Isle Sainte Marguerite, listening to the music of the leaping waves, feasting my eyes on the tempting

fruit; and then once more the golden Aioli advances with its shining waters. I am lost! the summer is *manqué;* the many delights of the *cuisine Provençal* are blotted out of memory by the swift inhaling of an evanescent sauce. The French leg of mutton of *la cuisine bourgeoise* is always *Piquée à l'Ail.* Thereby, amidst the resinous groves of the Isle Sainte Marguerite, opposite Cannes, I was introduced to the potent virtues of savoury garlic."

Beau Brummell, when asked whether a gentleman might eat Onions immediately before going into the company of gentlewomen, remarked sententiously, "No man is so well looking, and fascinating, that on entering a ball-room he can afford to handicap himself with a stink."

Leeks (*Allium porrium*) contain sulphur, and possess expectorant properties. Their juice will purify the blood at spring-time.

> "Now Leeks are in season, for pottage full good,
> That spareth the milch cow, and purgeth the blood."
> TUSSER, *Husbandry for March.*

Furthermore, they stimulate the kidneys, and will dissolve earthy phosphates in the bladder.

> "Eat Leeks in Lide, and ransoms in May,
> Then all the year after physicians can play."

For chilblains, or chapped hands, Leek juice with cream is an efficient salve. The Emperor Nero, (Porrophagus), ate Leeks with oil for several days together so as to clear his voice. When meat savour is withheld from soups, a flavouring by Leeks will satisfy any ordinary craving for condimentary taste; but if a stronger desire prevails, then the most acceptable flavouring vegetable is the Onion. Hence among persons who are not fastidious, or soon offended by powerful, even vulgar, odours, strongly-flavoured meals are thought highly palatable, though they surround the eaters thereof with an atmosphere of garlic, and cause them to be given a wide berth by sensitive neighbours. "We have known a whole suite of most æsthetically fresh apartments, the drawing-room being scented by a fragrant wealth of natural flowers, literally penetrated for the entire evening with the oniony exhalations of a single guest who had made his mid-day meal on a collation of unmitigated coarseness. Such feeding is only fit for those who remain in quarantine, or in the open air, and its results should never be inflicted on

delicate noses. The soups, and vegetable dishes consisting mainly of Onions, should be so mitigated as to bear the test of polite intercourse, and should fall into the rank of civilized cookery, be it *au gras*, or *au maigre*, for days of rejoicing, or abstinence."

The Cock-a-Leekie soup of Caledonia is graphically described by Sir Walter Scott in *The Fortunes of Nigel*. This was the favourite clear soup of her late Majesty Queen Victoria when at Balmoral. The Leeks must be young, and small, and well cut (using the white part only) into pieces about half an inch long; these are to be thrown into cold water overnight; in the morning remove just the centre of each piece with a small wooden skewer; next blanch them; cool, and drain, and place the pieces of Leek in a stewpan of the required size, with plenty of clear clarified butter, and a few slices of raw, green ham; in the evening pass the Leeks very slowly indeed over the stove for about fifteen minutes; pour off the butter, and add a good boiling consommé (in which a chicken has been cooked) during the clarification, and boil for half an hour; cut the breast of this chicken into very small white pieces, and put them in the tureen; remove the ham from the soup; season the latter, and pour it into the tureen, freeing it from all fat with whitey-brown paper. Then the soup is ready. French plums (stoned, and stewed in the consommé) were always served on a soup-plate with this Cock-a-Leekie at the Royal table. The Welsh, who live much upon Leeks, are found to be very fruitful of progeny. "These products are," writes Evelyn, "of virtue said to be prolifeck; since Latona, the mother of Apollo, longed after them."

Chives (*Allium schœnoprasum*) are an evergreen perennial herb of the Onion tribe, with a milder flavour than the bulbs. Epicures consider this the best seasoning for beef-steaks, either by eating the small bulb, or by rubbing the platter therewith when cut in half.

The *Schalot* is another variety of this Onion tribe, being called also the Scallion, or Cibol, of a mild flavour, and preferred in pickle-making. As to Chives, these tiny Onion-like plants are as superior in flavour to an Onion as an oyster is to a cockle; they are said to have been introduced into Britain by the Roman soldiers, and accordingly they are found flourishing in plenty near the Roman Wall in Northumberland, and elsewhere. They grow there like thrift, and without any bulb, the stalks being

edible at the top, and making a very excellent antiseptic flavouring.

Among herbal simples the "Poor Man's Garlic, or "Jack by the hedge," (*Erysimum allium*), occurs as a well-known roadside variety of the Onion plant tribe, growing in wild and luxuriant abundance throughout the whole English summer. It is distinguished by brightly green, glossy, heart-shaped leaves, which when bruised emit a strong odour of garlic; also by headpieces of small white flowering bunches. This homely plant has been of popular use as a savoury accompaniment of a poor man's bread and cheese, from quite early times; it also bears the name "Sauce-alone." When gathered fresh, and boiled separately in its own juices, it makes an excellent addition to boiled mutton, and is of antiseptic virtue, with slightly aperient effects which are easy, and not griping. Our forefathers valued the same modest herb highly for its anti-scorbutic usefulness. "The antients," says Evelyn, "employed 'Jack by the hedge' as a succedaneum to their scordium."

OPEN AIR TREATMENT, OF PULMONARY CONSUMPTION, (*See* OILS—COD-LIVER).

BUT, as says an old adage, "You may lead a horse to the water, yet you cannot make him drink." A clergyman who is in the habit of taking dwellers in London slums down into the country, by fifties, in breaks, for summer holidays about the green fields and gardens, was dismayed on the party drawing up one evening at the entrance to their alley, after one of these outings, to hear one of them say, as if giving voice to the general sentiment, "The country's fine for a 'oliday, mates, but arter all this smells like 'ome." As regards the hereditary bias of tubercular consumption, it cannot be expected that this can be eradicated in one generation even by the recently adopted, and highly efficacious treatment of destroying the microbes which specialize the disease —by high altitudes, open, fresh, cold air, abundant sunlight, and most generous feeding.

> "Naturam expellas furcâ, tamen usque recurret,
> Et mala perrumpet, furtim fastidia victrix."

So says the well-known Horatian maxim; and as yet modern medicine has only modified the "*usque*" to "*sæpe.*" It may

be well to ask what Koch, the eminent pathologist, means when he pronounces that the tuberculosis of consumption is not inherited. If he means that children of consumptive parents are not born with tubercles ready formed, he is certainly right ; they are not so born. But they are born with the potency of both tubercles, and whiskers, for future development as life proceeds. And it is this *predisposition* which has to be slowly eradicated by the patient sanitation of several successive lifetimes, so that the bacillus of tuberculosis may then no longer find a soil which can support it. Microbes which produce disease are often known to occupy harmlessly an organism immune against their further development. Respecting the pursuance of open-air treatment in England, serious doubts may well be entertained as to whether, or not, this is safely, or hopefully practicable, because of our damp, chilly, changeable climate during nine months of the year. For a cure by open air such air must, as an essential requirement, be dry, pure, and of an equable temperature throughout.

ORANGE.

THERE are three principal varieties of the Orange (*Aurantium*),—the sweet, or China Orange (*Citrus aurantium*) ; the bitter, or Seville Orange, (or *Bigarade*), used because of its bitter rind for making marmalade ; and the Bergamot Orange (*Citrus medica bergamot*). The Tangerine Orange is a sub-variety of the Mandarin, a small, flattened sort in which the rind separates very readily from the pulp, which is sweet, and delicious of flavour. The table, or China Orange, contains citric acid, citrate of potash, albumin, cellulose, water, and, when sweetly ripe, 8 per cent of fruit-sugar. Orange-peel affords a considerable quantity of fragrant aromatic oil, with a bitter principle, especially in the rind of the Seville Orange, which is darker in colour, and possesses tonic properties. Chemically the peel affords also hesperidin, a volatile oil, gallic acid, and cellulose. In the seventeenth century this peel was slowly masticated (when first nicely candied) for curing heartburn through an excess of acid in the stomach. If made into marmalade, the rind of the Seville Orange powerfully restrains immoderate fluxes of women. The leaves, and flowers, of the Orange tree have sedative virtues, and are esteemed as useful against

epilepsy, or other convulsive disorders; a tea is also made from them for hysterical patients. Orange-flower water (*l'Eau de fleur d'Oranger*) is frequently taken in France by ladies as a mild soporific at night, when sufficiently diluted with sugared water. Thousands of gallons are drunk there in this way every year. Dried Orange berries may be had from English druggists; and if a teaspoonful of these be crushed, and infused in a teacupful of quite hot water, the clear liquid will make a gentle sleeping draught, without giving a headache next morning. In *Great Expectations* (by Charles Dickens) "Mrs. Pocket looked up from her book, and, smiling upon Pip, in an absent state of mind asked him if he liked the taste of Orange-flower water, this question not having any bearing, near or remote, on any foregone, or subsequent transaction."

The Orange berries furnish a fragrant oil, *essence de petit grain*, and contain citrates, and malates of lime, and potash, with hesperidin, sulphur, and mineral salts. The flowers yield a volatile odorous oil, acetic acid, and acetate of lime; the juice of an Orange consists of citric, and malic acids, with fruit-sugar, citrate of lime, and water. As an appetizing and energizing bitter tonic the Seville Orange-peel can well take the place of cinchona bark; indeed, the Pharmacopœial tincture of Quinine contains that alkaloid, and the Orange bitter, on equal terms. They are each antidotal to malarious fever, and ague. Our two great Universities are nobly loyal to Orange Marmalade, of which a notably superior kind is made at Oxford, and is now sent from thence far and wide; its extra bitterness, and manifest purity, fully commend such popularity. A saying goes there that no undergraduate can pass his "little go" until he has consumed his own weight of Marmalade; which conserve got the name "Squish" first at Oxford. Orange oil is an essential oil extracted from the rind of both the bitter and the sweet Orange; it is used in liqueur-making, and in perfumery.

Professor Kirk, of Edinburgh, in his *Papers on Health*, admonishes persons concerning this fruit when eaten recklessly; "We have known most serious stomach disturbance caused to healthy persons by eating the whole substance of an Orange, except the outer rind. Some parts of the inner rind, and the partitions of the fruit, will act with certain individuals almost like poison; these portions should therefore be always rejected; the juice is most beneficial." Common Oranges, if

cut through the middle while green, and dried in the air, being afterwards steeped for forty days in oil, are used by the Arabs for preparing an essence famous among their elderly women, for restoring a fresh dark, or black colour, to grey hair.

To make a syrup of Orange flowers: "Take four pounds of clarified sugar, and boil it to pearl; put into it several handfuls of perfectly fresh, and well-picked Orange flowers, and give them a good boil. Take it off the fire, and allow the flowers to infuse for two hours; then put it back over the fire, and boil it up a few more times. Place a sieve over an earthenware dish, and pour in the syrup so as to strain out the flowers; then put it again over the fire, and bring it out to small pearl. Allow it to cool in an earthenware dish, and pour it into bottles."

The white lining pith of Orange-peel yields likewise the crystalline principle, "hesperidin." Dr. Cullen has shown that the acid juice of Oranges, by uniting with the bile, diminishes the bitterness of that secretion; and hence it is that this fruit is of particular service in illnesses which arise from a redundancy of bile, chiefly in dark persons of a fibrous, or bilious temperament. But in the case of other individuals having only a small liver, and proportionate secreting powers of bile-making, Oranges will prove purgative, and induce colicky pains. Fresh Oranges will obviate a craving for intoxicating drinks: they allay thirst, and their fruit acids act beneficially. Because lessening the blood fibrin, which takes on an excess during influenza, Orange juice, if swallowed freely, is found to cut short that malady, and to prevent lung inflammation therefrom.

This fruit has lately acquired a reputation for particular benefits conferred on the consumptive. An Orange-cure which proceeds after such fashion is growing in favour, the Oranges being taken repeatedly every day, and always at meal-times. In Florida the said cure is practised systematically, the Navel Orange being chiefly selected, because of its abundant juice, and the specific virtues it is believed to possess for biliary, and bronchial ailments. Dr. Samuel Wesley (*Primitive Physic*, 1743) advised "for a cold in the head: thin the yellow rind of an Orange; roll this up inside out, and thrust a roll into each nostril." "The Orange," says Evelyn, "exceedingly refreshes and resists putrefaction; the very spoils and rinds of Oranges and Limons, being shred and sprinkled among other Herbs do correct their acrimony."

In America Orange tea is taken frequently as a substitute

for the China tea, being made by pressing out the Orange juice, and adding it when strained through muslin, to an equal quantity of boiling water, with sugar. Orange butter was a former confection, as told of in the *Closet of Rarities* (1706). It is made, in the Dutch way, as follows: "Take of new cream a gallon, beat this up to a thickness; then add four ounces of Orange-flower water, with the same quantity of red wine; and being thus become of the thickness of butter, it retains both the colour, and scent of an orange." In former English times it was a custom at dessert to squeeze the Orange juice into a wineglass, and so drink it. "Dr. Samuel Johnson would suffer his next neighbour at table to squeeze the juice of China Oranges into his wineglass after dinner, else perchance, because the good man had neither straight sight, nor steady nerves, the juice would have run aside, and trickled into the Doctor's capacious shoes." In his day a perfumed snuff was made, known as "Orangery." "Oh, lord! Sir! you must never sneeze: 'tis as unbecoming after Orangery as grace after meat." Parkinson relates, in his *Herbal:* "That the seeds (pips) of the Orange, being set into the ground in the spring-time, will quickly grow up; and when they are a finger's length high, being pluck't up, and put among sallets, will give them a marvellous fine spicy aromatick taste which is very acceptable." Spenser, and Milton, tell of the Orange as "the veritable golden apple presented by Jupiter to Juno on the day of their nuptials"; hence has perhaps arisen its more modern association with marriage rites. The delicious perfumes of neroli and napha, exhaled by the flowers, are cordial and soothing: therefore appropriate for the bride; whilst the bridegroom is blithely gay "with joy in his heart, and a gardenia in his button hole." Virgil in classic times wrote about the *Aureum malum:* "*Aurea mala decem misi, cras altera mittam.*" At Paraguay in South America there are forests of Orange trees, the same region being full of small establishments for extracting the Orange essence, which the natives regard as a valuable curative ointment; they apply it to wounds, and cuts, declaring that it has such healing qualities that it permeates every part of the affected flesh, restoring the injured structures very quickly.

When Alice (*in Wonderland*) "went for miles and miles down the rabbit's dark hole, she passed cupboards, and book-shelves during her long fall, and from one of the latter she took a

jar as she passed, which was labelled in large letters ORANGE MARMALADE ; but to her great disappointment it was empty. She did not like to drop the jar for fear of killing somebody underneath, so managed to put it into one of the cupboards as she fell past it." For making Orange Marmalade : "To sixteen bitter (Seville) Oranges allow five lemons, cutting these into thin slices, and removing the pips ; put them into a basin, and cover with water. To each pound of fruit put three pints of water, and set it aside until the next day ; then boil until the peel can be easily crushed with the fingers, and put it away again until the third day, when to every pound of fruit, and liquor, add one pound of loaf sugar ; boil briskly for from three-quarters to one hour, or until it sets when tried upon a plate." This is a reliable recipe which has proved highly successful, and the Marmalade will keep good for years. Pepys (March 9th, 1669), when at his "cozen Turner's house, drank (which he never did before) a glass of a pint, I believe, at one draught of the juice of Oranges, of whose peel they make comfits ; and here they drink the juice as wine, with sugar ; and it is very fine drink, but, it being new, I was doubtful whether it might not do me hurt."

Mandarin, or Tangerine Orange Preserve, may be prepared thus, after a Dutch recipe : "Take two pounds more sugar than the weight of the (Tangerine) Oranges ; rasp the peel with a piece of glass (which prevents it from tasting of steel), or with a blunt knife ; cut two slits across the bottom of each Orange ; lay them in water for two, or three days, changing the water each day ; boil the syrup, and pour it when tepid over the fruit ; then leave it for a night ; let it simmer slowly on the second, and third days ; then bottle, and cork well."

For Orange jelly, only to be made when Oranges are in season, so as to be juicy, and of proper flavour, ("*La gelée d'Oranges à l'Angleterre*) : "For one mould take eight good Oranges, and two lemons ; peel three of the Oranges very finely indeed ; rinse the peel in cold water, and steep it in a small quantity of warm syrup, (three pounds of white sugar to a quart of water, boiled gently for five minutes, and strained, make a very useful syrup) ; now cut the Oranges into halves, and squeeze out all the juice, but do not make the juice too cloudy by hurrying the process ; add the juice of two lemons, and the syrup to taste, with a tumblerful of cold water, and a small quantity of gelatine

(Nelson's). Have the mould well set previously in ice, or in quite cold water, as this jelly must set quickly, because the acids are liable to cut the gelatine if it lingers about for at all a long time ; try a small quantity in a spoon on the ice, or water, and directly the setting point is obtained, pour the jelly into the mould ; of course the quantity of lemon-juice may vary according to the sweetness of the Oranges. The jelly should be carefully squeezed through a double tammy before putting it into the mould, and should be fairly clear ; if the colour is too weak add a few drops of carmine. Always take care that the peel of the Oranges is used as thin as it can be made, since only the outermost rind gives the flavour." Or, again : "Take one ounce of isinglass in just enough water to cover it ; also the grated rind of four oranges, with four teaspoonfuls of sugar, grating the rind thereupon ; then mix it with the isinglass, and simmer over a slow fire with the Orange juice, strained, (one and a half tumblerfuls of this) ; add a small piece of cinnamon, and a slice of lemon."

For an Orange sweet salad, which will aid the digestion of a substantial meal, and is of itself delicious : "Take eight sweet Oranges, one pineapple, four ounces of white sugar, and (if allowed) a wineglassful of brandy, or sherry ; peel, and core the Oranges, and lay them in a glass dish, sprinkling well with the sugar, and with slices of pineapple between, cut thin, having the rough outside taken off ; (then add the brandy, or sherry) ; keep the dish covered up with another inverted dish for an hour."

Orange gin is a capital cordial spirit, with tonic qualities superadded : "Take half a gallon of gin, and half a pint of Seville Orange juice, one and a half pounds of loaf sugar, and the rinds of seven oranges pared very thin ; put all into a closely covered jar, and let it stand for five days, stirring it twice every day; afterwards strain, and bottle in well-corked bottles for one year ; it will then be ready for use, but will keep for any length of time."

OYSTER. *(Ostræa edulis).*

The well-known Oyster is a mollusc, possessing a mouth, a stomach, and intestines, but no head, nor eyes ; it has a heart, a digestive gland, kidneys and a nervous system ; its substance is specially rich in phosphates, such as serve for food to replenish

defective structures, and to restore exhausted energy to invalids, or the sick. It has been extolled for these nutritive qualities since the old Roman days of Horace, and Martial, and of the Oyster-beds at Baiæ, which was the Brighton of Rome. Our Early English *Babee's Book* has told of "Oysturs in ceny, Oysturs in grauey, your helthe to renew." And to-day Dr. Philpotts (1898) says: "The Oyster is good for the unborn child, good for the babe when two years old, good for adolescent youth, good for manhood in its maturity, and not only good for, but a main strengthener to, old age in its inevitable decay; it can make the sick well, render the healthy more vigorous, prolong the shortening days of senility, having imparted an additional charm to youth, and beauty." Again: "Living Oysters are endowed with their proper medicinal virtues: they nourish wonderfully, and solicit rest; for he who sups on Oysters is wont that night to sleep placidly; and to the valetudinary affiicted with a weak stomach, ten or twelve Oysters in the morning, or one hour before dinner, are more healing than any drug, or mixture that the apothecary can compound."

Oysters contain albuminous, gelatinous, and fatty matters, muscular filaments, and creatin. One of these molluscs is composed, speaking roughly, of water (eighty-five parts), organic matter (one and a half parts), with mineral matters, and silica (two and three-quarter parts). The Oyster is an admirable combination of food, and physic, because of its iodine, iron, sulphur, and marine lime salts; the liquor with which it is furnished inside the concave shell, when opened, being particularly rich in these curative, and restorative constituents. Five years are needed for the Oyster to attain its full growth. It consists of a hard, and a soft portion; the soft dark-green part is the liver, which is very digestible; the hard part is the muscle which binds the shells together, and is not so negotiable by weakly digestive powers. When Oysters are stewed, or scalloped, their albumin is coagulated by the heat, and becomes less easily soluble by the gastric juices of the stomach. The beard is the branchiæ, or gills. It has been said that the Oyster digests itself, because when the liver is crushed in eating, the hepatic cells are set free, and the glycogen is brought into contact with the hepatic ferment, thereby digesting the main part of the mollusc, with little effort of the stomach on the part of the partaker. If this view is correct, an Oyster should be masticated

in the mouth, and not swallowed whole. A marked difference is shown as to the action of cold water on the crushed, and uncrushed Oyster respectively; no less than half the solid matters are dissolved in the former case, but only one-fourth in the latter. Moreover, without doubt the Oyster's true flavour is appreciated most when the mollusc is masticated, a sweet taste being then given by the liver—glycogen. Its mineral matters comprise a minute portion of copper oxide, with chloride of sodium, phosphate of lime, and of magnesia, together with other soluble phosphates. It thus becomes shown that Oysters afford nutritive material of each class,—proteid, carbohydrate, fat, and mineral salts,—all of these food elements being present in a readily assimilable form. But the proportion of solid nutriment in an Oyster is not large, three dozen of these molluscs of moderate size containing only from three to five ounces of solids; whilst their nitrogenous matter is not all proteid, but partly of a lower nutritive value. It would take fourteen ordinary Oysters to contain as much valid nourishment as one egg; therefore surprise need scarcely be felt at hearing of enormous meals being occasionally made of Oysters at one sitting. Seeing that the amount of glycogen, or liver sugar, contained in this mollusc is very small, it need not be pronounced unsuitable for a diabetic patient; its glycero-phosphatic compounds correspond to lecithin, as now used in medicine, from eggs, and other sources, for improving the nutrition of the nervous system. In the thickest part of the Oyster is its mass of olive-green liver. (Formerly the human liver was supposed to be the seat of love.) A property of stimulating the sexual impulses is ascribed to Oysters. "Oysters, and eggs," says Byron, "are amatory food."

The best solvent of the Oyster, next to cold water, is found by practical experiment to be gin, which also brings out the flavour considerably. Chablis is likewise said to be a good solvent, especially of the mineral matters contained in the Oyster; indeed, the whole of the phosphates are dissolved thereby. Champagne has probably the same effect; and because of its exhilarating gases it is an improvement on Chablis. Again, Stout is preferred by many persons as a beverage with Oysters, but "curiously enough" (says the *Lancet*, 1903) "it does not seem to have any solvent effect thereupon, probably because the Stout already contains a

relatively large proportion of soluble matters." On concentrating the liquor which accompanies the Oyster within its shell, a brown liquid results which is indistinguishable, as regards taste and smell, from well-prepared beef-tea ; it develops " osmazome " to a remarkable degree. The boiled Oyster yields scarcely any soluble matter to cold water, whilst it becomes tough, and indigestible by the process. Oysters contain an albuminous juice which increases in hardness with an increase of temperature, just as the albumin, or white of an egg does. They should, therefore, when cooked be subjected to only a low degree of heat, and for a short time, it being borne in mind that 160° Fahrenheit is the cooking temperature to coagulate albumen. In other words, to boil Oysters is to harden them, and to make them difficult of digestion.

A mistrust of Oysters, as so frequently and undeniably conveying typhoid fever during the last few years, because of crude sewage gaining unrestricted access to their beds, has possessed, and still possesses the public mind. It is, however, reassuring to know that the principal Oyster cultivators, whose trade therein has suffered to a most serious extent, have instituted rigid inspections, and adopted vigorous measures to remedy this grave evil. Any suspected Oysters, before coming to table, should be first put for several days into salted water, and changed several times (without food), so as to scour themselves from possible ptomaines, and then the Oysters may be eaten with impunity. In the epidemic of typhoid fever recently at Winchester (1902) caused by eating contaminated Oysters at the Mayor's Banquet, a local doctor learnt the striking fact that the majority of sufferers who then fell ill were pronounced teetotallers ; in which connection it would seem that a moderate use of diluted alcohol is sufficient to practically prevent mischief from typhoid germs. After a series of exhaustive experiments made lately by the Chicago Board of Health, it has been determined that the typhoid germ literally curls up under the action of fresh lemon-juice ; a dose or two of this simple antidote produces much the same effect on the microbes of typhoid, as a spoonful of salt does on a snail, or slug. It is therefore suggested that persons who eat Oysters should unfailingly take fresh lemon-juice with them, instead of vinegar, which is commonly used as an accompaniment, though a considerable number of Oyster-eaters prefer the bivalve plain. "But still later observation

has been said to show that lemon-juice does not produce its lethal effect upon typhoid germs until after at least twenty hours have elapsed; which fact, if it be such, disposes of the idea that a consumer of Oysters safeguards himself against typhoid infection therefrom, even if he eats a whole lemon with each Oyster"; thus reasons *The Table*, February, 1903. The poet Hood, in his humorous tale of *Miss Kilmansegg, and her Golden Leg*, sings incidentally thus:—

"What different fates our stars accord!
One babe is welcomed, and wooed as a lord,
Another is shunned like a leper;
One to the world's wine, and honey, and corn,
Another, like Colchester native, is born
To its vinegar only, and pepper."

"Scarcely one man in a thousand," says the Rev. J. G. Wood, "knows how to open an Oyster, and still less, how to eat it; the usual method of the Oyster-shops is radically wrong, whereby all the juice is lost, and the Oyster is left to become dry, and insipid on the flat shell; this being slightly convex inside, effectually answers to drain off the liquor, (the same being to the Oyster what milk is to the cocoanut). There is as much difference between an Oyster properly opened, and eaten before its aroma has had time to escape, as between champagne frothy, and leaping out of the silver-necked bottle, and the same wine after it has been allowed to stand six hours with the cork removed." When an Oyster is opened, it is possible on a careful examination to see the heart beating, almost as strongly as it did before the operation was performed. Though the Oyster has neither eyes, nor ears, yet if you let the shadow of your hand fall on his shell when permitted to be open, it will be instantly closed up, such is his sensitiveness; and his intelligence is of the same order. He lies on the bulged shell (which is concave within), and it is supposed when he happens to have this shell uppermost he cannot unclose his shell; so in frosty weather (an Oyster hates frost) he manages to keep the flatter side of the shell undermost, and runs no risk of opening, and thus letting the ice-cold water chill his delicate organization; but to turn over again is not an easy matter, and gives Mr. Oyster some little trouble in the way of manœuvring. "Wery good power o' suction, Sammy, you've got," said Mr. Weller, Senior (in *Pickwick*), looking into the pot of ale when his firstborn took

a long swig, and set it down half-empty. "You'd ha' made an oncommon fine Oyster, Sammy, if you'd been born in that station of life."

For "Oysters roasted in the shell": "Wash the shells very carefully with a brush; then put them (unopened) in a wire broiler, over glowing coals, the round side of each shell down so as to hold the juice; cook them quickly, turning them once, or twice, until the shells open; or, they may be thus cooked in a hot oven. When they are done remove the upper half of each shell, and season quickly with salt, pepper, and a tiny piece of butter (adding lemon-juice if liked); serve the Oysters while they are very hot." The true Oyster flavour is delightfully developed by preparing them in this way. For Oyster pie: "Line a pie-dish with puff paste, and fill it with slices of stale bread; butter the paste that covers the edge of the dish, lay a cover of puff paste over the pie, then press the edges very lightly together, trim them, and bake quickly in a hot oven. Meanwhile drain the liquor from one quart of Oysters, and chop them fine with a sharp, thin-bladed knife; blend a teaspoonful of corn starch in a very little milk; pour over it one half-pint of boiling milk, or cream, and put it over the fire in a saucepan; stir till it thickens, then add one ounce of butter; when the butter has been well mixed in, season the chopped Oysters with salt, and pepper; stir them into the thickened milk, and let it simmer (stirring all the time) for five minutes, and then take it from off the fire. When the bread-pie is baked remove it from the oven, and while it is still hot carefully take off the upper crust, withdraw the bread, and fill the dish with the thickened cream, or milk, and chopped Oysters; replace the crust; put the pie again in the oven till it is thoroughly hot; and then serve." Dr. Kitchener, in his *Cook's Oracle*, 1821, has commended "Oysters dried and powdered, this being done by mixing three dozen natives with seven ounces of dried flour, into a paste which is to be dried and powdered to six ounces. This powder, if made with plump juicy natives, will abound with the flavour of the fish; and if closely corked, and kept in a dry place, it will remain good. Sprinkled on bread and butter it makes an excellent sandwich, and is especially worthy the notice of country housekeepers." Oyster-tea is of good service for nausea of stomach (not surfeited with indigestible food), and it will often be retained by a

qualmish delicate invalid when almost everything else is rejected. Select eight fresh Oysters, and chop them fine on a chopping board; then turn them into a saucepan with a cup of cold water; set the saucepan on the fire, and let the water come slowly to the boiling point; then simmer for five minutes; strain the liquid into a basin, flavour it with half a saltspoonful of salt, and serve it hot, with, or without a small piece of dry toast, or a rusk. An old fable runs to the effect that Oysters rise to the surface of the water at the time of full moon, and open their shells to receive the falling dew-drops, which presently harden into pearls. For the "Prairie Oyster," put a teaspoonful of vinegar into a wineglass, and break an egg thereinto, with, or without the white; a dessertspoonful of Harvey sauce, a pinch of salt, and a dust of pepper should be added. Oysters were more common, and cheaper in England sixty or seventy years ago, than they have now become. Mr. Pickwick, in his journey to Ipswich on the Stage-coach, while passing through Whitechapel, noticed the crowded, and filthy street through which they were being driven. "It's a very remarkable circumstance, Sir," said Sam Weller, his servant, "that poverty, and Oysters, always seem to go together; the poorer a place is the greater call there seems to be for Oysters. Look here, Sir! blest if I don't think that ven a man's wery poor he rushes out of his lodgings, and eats Oysters for regular desperation." "To be sure he do," said Mr. Weller, senior; "and it's just the same with pickled salmon." Again, when on Christmas morning Ben Allen, and Bob Sawyer, two medical students, began the day, "One on 'em," reported Sam to Mr. Pickwick, "one on 'em's got his legs on the table, and is a drinking brandy neat; while t'other one, him in the barnacles, 'as got a barrel o' Oysters atween his knees, vich he's a openin' like steam, and as fast as he eats 'em he takes a aim vith the shells at young dropsy (the fat boy) who's a sittin' down fast asleep in the chimbley corner." Further on, at Bob's supper party in Lant Street, the Borough, "the man to whom the order for Oysters had been sent had not been told to open them. It's a very difficult thing to open an Oyster with a limp knife, or a two-pronged fork, and very little was done in this way. Very little of the beef was done either; and the ham (which was also from the German sausage shop round the corner) was in a similar predicament. However, there was plenty of porter

in a tin can, and the cheese went a great way, for it was very strong."

The elementary composition of Mussels, Clams, Winkles, Scallops, and other molluscs (soft-shelled), is very similar to that of the Oyster; but these cannot be regarded as foods of equally important value, except, perhaps, as respecting the *Clam*, which some American doctors believe to have four times the food-worth of the Oyster for persons suffering from nervous prostration. This mollusc contains a large amount of phosphorus, in combination with earthy salts. Clam-broth is supplied in tins (by the Messrs. Fuller, London) as consisting of concentrated Clam-juice, an admirable medicament for strumous, and consumptive invalids. It is a thick liquid with a strong fishy smell, like that of the lobster. For cooking it, take therewith one part of fresh milk, and a little fresh butter, and some ground *white* pepper. Heat quickly, but not to boil; and serve hot, with dice of toast. An enamelled saucepan should be used, and the broth sent up in a breakfast cup, or small bowl. The albuminates of the Clam are in a high proportion, being soluble, and not spoilt by boiling. Celery is an improvement to the broth. "Allow me," said the irrepressible Sam Weller, "to express a hope as you won't reduce me to extremities; in sayin' which I merely quote what the nobleman addressed to the fractious Periwinkle ven he vouldn't come out o'is shell by means of a pin, and he consequently began to be afeerd that he should be obliiged to crack him in the parlour door."

Wedgewood, referring to the Periwinkle, Pennywinkle, and Pinpatch (a sea snail), explains the name as derived from the (supposed) Anglo-Saxon "Pinewincle," "Pinwinkle," or Winkle, that is eaten by the help of a pin used in pulling it out from the shell. "What capital things Oysters would be," said a wit, "if we could eat them ourselves, and feed our servants with the shells!" The principal constituent of Oyster shells is carbonate of lime, their remaining organic elements being phosphate, and sulphate of lime and magnesia, silica, oxide of iron, and alumina. Some cases of cure effected in cancer by a steady perseverance in the medicinal use of Oyster-shell powder are recorded on trustworthy evidence. The late Sir Spencer Wells employed this remedy for many such cases, and broached the theory that a starvation of certain tumours by lime slowly deposited in the blood-vessels commanding their circulation, may be produced

thereby, and thus shrivelling up the tumours to extinction. To prepare the Oyster-shell powder, bake a quantity of the shells, using those which are concave (half a peck, or more), for three nights in a slow oven, then scrape out the small white part within each shell; powder these parts finely, and take as much of the powder as will lie, rather heaped up, on a shilling, once, or twice a day in a little warm water, or milk. If an ointment is also thought desirable for external use at the same time, mix some of the dried powder with unsalted lard, or cream, quite fresh, and apply it. This treatment needs perseverance, sometimes tor three or four months, before its curative effects begin to be perceived. Abernethy, when on one occasion asked by a tiresome dyspeptic invalid what she might eat, replied, "Well! you mustn't try the poker, tongs, or bellows."

"'Poker, and tongs, too hard you'll find,
Bellows will blow you up with wind.'
'May I eat Oysters, Sir?' 'Yes, well!'
'And what besides?' 'Why, eat the shell.'"

"*Il raisonne comme une huitre*" is a French proverb, (corrupted with us into "mad as a *hatter*"): he "reasons like an Oyster." At Midcolne in Essex, an annual banquet of gin and gingerbread is held at the time of the Colchester Mayor's Oyster Feast, October 25th. Sydney Smith, whilst in Edinburgh (1800) with his pupil, Mr. Beach, passed but few days without meeting talented friends in (what were then very common) Oyster-cellars, "where the most delightful little suppers used to be given, at which every subject was discussed with a freedom impossible in larger societies, and with a candour which is only found where men fight for truth, and not for victory. When Thackeray went to Boston in 1852, some friends asked him to partake of American Oysters; about the marvellous size of which he had heard strange reports. Six bloated Falstaffian bivalves were placed before him in their shells; whereat he gazed anxiously, with fork upraised, seeking, with a look of amazement, to know, How shall I tackle them? On learning the simple process by which the free-born citizens of America are accustomed to accomplish the task, he first selected the smallest one of the half-dozen (rejecting a larger one because, as he said, it resembled the High Priest's Servant's ear that Peter cut off), and then bowed his head as if he were saying Grace. Opening his mouth very wide, he struggled for a moment, after which all was over. "I shall never forget the

comic look of despair he cast upon the other five over-occupied shells ; and I then broke the perfect stillness by asking him how he felt." "Profoundly grateful," he replied, "as if I had swallowed a small baby."

In *Sketches by Boz* (Dickens, 1836), Scene XII, there is described : "A deal table on which are exposed Oysters, and divers specimens of a species of snail (*Wilks* we think they are called) floating in a somewhat bilious-looking, green liquid." The Whelk, here intended, is still a familiar edible with the people as seen on the huckster's stall, in common with the Winkle, about poor streets in our towns. Colouring matter may be squeezed out of the Whelk, this being at first almost colourless ; but by the action of light it shortly turns to a citron tint, then pale green, next emerald green, azure, red, and finally, in about forty-eight hours, to a magnificent purple hue ; but it must not be allowed to become dry during the experiment. This colouring matter has been found highly useful for curing congestion of the womb, and for obviating insipid (sugarless) diabetes. Uric acid exists in these shell-fish, within a sac, which is the first rudiment of a kidney ; and the uric acid obtained therefrom may be transformed into a purple of great beauty, "purpurate of ammonia," similar in all probability to the famous Tyrian purple of old. Both this humble mollusc, and its stall-companion, the common Winkle (*Littorina littorea*), so largely eaten in poor neighbourhoods as a relish at tea, are "nourishing food, very restorative in consumption, and hecticks, being sod in their own sea-water." For consumptive patients they are to be boiled in milk ; others may eat them boyled in vinegar, or water and salt." "As an appetizing tit-bit the Whelk is in London King of its Eastern quarters. Hie then to yonder flamboyant kiosk perambulatory on Phœbus's wheels, where on snow-white platter recline the molluscs, shelled ; these, however, touch not. The true gourmet with simple pin coaxes from the involute conch its curly, luscious inhabitant, an implicate, and whirled delight. Add a *soupçon* of vinaigre, and, paying such reverence as the plat merits, straightway eat ! Delight will be yours, and for a prolonged aftermath dreams, more dreams, and yet again more dreams ! Not Chambertin, nor St. Estephe, nor yet creamiest Sauterne befits to follow ; the one divine and only drink is now dusky Stout, fresh drawn, with silky bubbles brimming atop. Remember, too, the sapient example of tongue-gifted Elia ;

drink from the pewter, cool, and winking roguishly, yea, shining for very joy at compassing this so fragrant beverage! Fetched from neighbouring hostel by attendant nymph, for customary dole, and drunk amid the heat and glare of East End boulevard, 'tis Jove himself would raise the tankard high, and loud vociferate 'Io, Bacche!' Lift up thy voice then, and praise the East, and be well convinced that you have spent there a spell of a thousand-and-one-nights! The grateful remembrance will linger with you often in the blind regions of the West; the Orient will send memory's swift mercury-heeled messengers to the Occident! You will 'ear the East a callin', and you won't never heed nought else but this."

Salsify, a cultivated garden root of the Chicory tribe, is known as the Oyster plant, because its taste, when cooked, resembles that of the Oyster.

PARSLEY, (*See* HERBS).

PARSNIP.

THE cultivated Parsnip has been produced as a vegetable for eating since early Roman times. The roots, which are the edible part, afford starch abundantly, containing also as chemical constituents albumin, sugar, pectose, dextrin, fat, cellulose, mineral matters, and water, but less sugar than carrots, or turnips. The volatile oil with which this root is furnished causes it sometimes to disagree, and gives a flavour of characteristic peculiarity thereto. Parsnips are highly nutritive, and make a capital supplement to salt fish in Lent. In Gerarde's day Parsnips were known as Mypes. They require careful cooking, without excess of water, else the sugar is mainly boiled out. "Soft words," says an old adage, "butter no Parsnips." The roots may be stewed with advantage so as to retain their principal qualities. "Take nice Tender Parsnips, and cut them in rings; put them into a stewing-pot in layers, sprinkling over them some sugar (perhaps a little flour), and adding butter (a small piece between each layer); pour three-quarters of a pint of water over, and let it simmer for two hours, giving the pot an occasional toss." For Parsnip fritters: "Wash, and scrape the Parsnips, and cut them in slices; cover them with boiling water, and cook them until tender; then mash them

through a colander, and return them over the fire ; add to two large Parsnips a tablespoonful of butter, with salt, and pepper to taste, also one egg well beaten up ; mix thoroughly, and remove from the fire, making it when cool into small, flat cakes, and fry these in a little butter." All the virtues of the root are thus retained ; if boiled in much water it loses its starch, and sugar. Parsnip Marmalade, made with the roots, and a small quantity of sugar, is restorative, and appetizing. Parsnip Wine is exhilarating, and resembles the Malmsey of Madeira, but is of homely vintage only, and not fortified. Malmsey got its name from Malvasia, in Greece, being also known as Malvoisie ; it is usually sweet, strong, and of high flavour, being made in the Canary Islands, and the Azores. Malmsey-Madeira is a combination of the two wines.

" Old Simon the Cellarer keeps a large store
Of Malmsey, and Malvoisie,
And Cyprus ; and who can say how many more ?
For a chary old soul is he !
Of Sack, and Canary he never doth fail,
And all the year round there is brewing of Ale ;
Yet he never aileth, he quaintly doth say,
While he keeps to his sober six flagons a day ;
But ho ! ho ! ho ! his nose doth show
How oft the black Jack to his lips doth go."

Parsnip tea is an admirable drink for promoting a free flow of urine. " Cleanse, and slice a couple of Parsnips, and boil them in a quart of water from two to three hours, and strain." If some of this is drunk with an equal quantity of barley-water it proves of excellent service for allaying urinary irritation. Whilst wild this root is shunned by cattle ; its juices are then somewhat acrid, as well as sweet, and will cause disturbance of the brain even to insanity. It is believed in some parts of England that persons who eat of old parsnips which have been long in the ground, invariably become mad ; on which account the root is called there " Madnip."

PARTRIDGE, (*See* GAME).

GERVASE MARKHAM (seventeenth century) commended Partridges done on the broiling iron (now obsolete), which was open to the air on all sides, and most convenient for basting the birds. Partridge pudding was an invention of the South Saxons ; and

for "*Perdrix aux choux*" a quaint recipe is given in *The Professed Cook* (1776) by Clermont, "for many years clerk of the kitchen to some of the first families."

PASTRY.

THE Latin term for bread is *panis*, and its diminutive is *pastillus*, a small baked loaf, or roll; and hence has come our word *Pastry;* else through *Pastus*, "something eaten." From a very early period the Orientals were acquainted with the art of making Pastry. At first it generally consisted of certain mixtures of flour, oil, and honey, to which it was restricted for centuries; subsequently, at the commencement of the middle ages, changing to a compound of flour, eggs, butter, and salt, made into a paste for enclosing meat, whilst seasoned with spices. And the next step was to further include fruits, conserves, and cream. Finally, ornamental pastry, built up as pyramids, castles, and other fanciful designs, brought the art of pastry-making to supposed perfection.

"You that from pliant Paste would fabricks raise,
Expecting thence to get immortal praise,
Your knuckles try, and let your sinews know
Their power to knead, and give the form to Dough;
Chuse your materials right, and seasoning fix,
And with your fruit resplendent sugar mix;
From thence, of course, the figure will arise,
And elegance adorn the surface of your Pyes."

Art of Cookery, 1708.

Three Greek capital letters formed Hogarth's design for an invitation to dinner,—H. B. P.,—Heeta, Beta, Pi,—to "eat a bit o' pie." Against Mince-pies great conscientious objections were at one time raised. In the seventeenth century Quakers denounced these dainties as an invention of the Scarlet Woman of Babylon; a hodge-podge of superstition, Popery, the Devil, and all his works.

"Plum broth was Popish; and Mince Pie—
Oh! that was flat idolatry!"

HUDIBRAS.

A couple of hundred years ago it was a question of ecclesiastical debate whether clergymen ought to eat Mince-pies, because of their Popish origin; they were baked in a coffin-shaped crust to represent the manger in which the infant Christ was laid.

Puddings are of more modern invention, seeing that sugar and spices were rare and costly luxuries in the middle ages. Pepper was then the most common spice; and the old term of a "peppercorn rent" survives to show how highly this condiment was valued by the landlords of old times. It was frequently used for spicing over sweet pastry. Ginger, and cloves were the next common spices. Sugar was cheaper in those days than spices, but even this was costly, and difficult to obtain, so that it could not be employed after our present lavish way. In pastry-making the quality to be desired is lightness, which depends on the amount of air in the dough beforehand, and the expansion of the air after it is put in the oven. Therefore the best pastry is that which contains the greatest quantity of the coldest air before it is baked. The foldings, and rollings of pastry during its making have this increase of air in view; so that pastry should always be prepared in a cold place, and if set aside to wait between rollings, it should stand on a cold stone, or on ice. Eggs are used to increase the tenacity of the paste, and thus to make it hold more air. Baking powder has the same effect in pastry; it should be used rather for pastry to be baked at once, and little handled. The richer the paste, as a rule, the hotter should be the oven for baking it. All boiled puddings should be put on the fire in boiling water, and the pudding must always be kept covered with the water while simmering. The ingredients for puddings are generally better for being mixed some time before they are wanted. As an acceptable dish for dyspeptics, whilst good also for juveniles, an eggless plum pudding, of which a generous helping can be safely given, is to be made as usually; the materials being two small apples, and a medium-sized carrot, a pound each of stoned raisins, and currants, half a pound of mixed peel (minced), a grated nutmeg, half a teaspoonful of salt, an ounce of sweet almonds, chopped, or shredded cocoanut, twelve ounces of moist sugar, the same of chopped suet, twenty ounces of bread-crumbs, and a scant half-pint of home-made wine (raisin, or cowslip). No flour except what is used in chopping the suet, and as little as possible. This quantity composes three medium-sized, or four, small puddings, requiring four and a half hours' cooking. It is not advisable to form it into a single large pudding. For young children the currants may be replaced with advantage by sultanas, and the wine may be omitted in

favour of milk with a good dessertspoonful of cornflour. In *Alice through the Looking Glass* the White Knight invented a new pudding during the meat course at dinner. "What did you mean to make it of?" Alice asked. "It began with blotting-paper," the Knight answered; "not very nice alone, but you've no idea what a difference it makes mixing it with other things, such as gunpowder, and sealing-wax."

"In Hamelin Town" (R. Browning, 1842) "the inhabitants cling so devotedly to the Pied Piper Legend (Browning's poem) that they take every opportunity of commemorating it, one of the ways being by the manufacture of representative rat-like doughnuts, which is quite a local industry. The Hamelin Rats are made from a fermented dough of so light a character that they look almost like biscuits. It is composed of the very coarsest kind of flour, and becomes so hard that unless having teeth as sharp as the rat itself anyone attempting to eat the dough-nut would fail to make an impression thereupon. The tails, and paws are put on separately, but the ears are cut, and two currants form the eyes, whilst a few stout bristles passed through the dough make the rat's whiskers; the shapes are then baked of a dark-brown colour, and glazed; they find a ready sale as associated with the legend.

The *Saturday Review* has said in cynical mood that "pie-crust has killed more people than drink." For all persons who lack strong digestive powers, especially for the sick, pastry, of whatever sort, and however well made, is very questionable. Puddings, pies, and sweet confections of this character are baked, or boiled, at a high temperature, so that changes take place in the fats used, with formation of butyric, and other unwholesome acids; the flour, too, is altered in condition, and if a pudding or paste is boiled, the mass becomes solidified, and tenacious, so that the digestive juices cannot easily penetrate it. Goldsmith, who was always at his wit's end for money, and seldom sat at a well-furnished table tells in the *Haunch of Venison* respecting such feasts as he obtained access to in his day:—

> "At the top a fried liver, and bacon were seen,
> At the bottom was tripe in a swingeing tureen,
> At the sides there was spinach, and pudding made hot,
> At the middle a place where the Pastry—was not."

The Pasty, or Turn-over, in truth a Cornish device, originated

in the need by the miners of a portable food which they might carry with them to the mines for their dinner, and might eat without suffering harm by handling it with coppery fingers. Hence arose the Miner's Pasty, which is commonly slipped by them into a small cotton bag with a string run into the top, so that the contents may be eaten from out the bag, to be held in the miner's hand, and turned back as the Pasty diminishes. A Rhubarb pie is improved by sprinkling lemon-juice over it when eaten. A beef-steak pudding is to be preferred before a beef-steak pie (which often engenders harmful gaseous products within it). A mutton-chop pudding, with oysters therein, is excellent.

The *Pie*, both in its name, and in its nature, is peculiarly national to England, and interwoven with the history of our country's culture.

> "No soil upon earth is so dear to our eyes
> As the mud we first stirred in terrestrial pies;
> And what are the prizes we perish to win
> To the first little minnow we caught with a pin?"

Pepys tells of going (January 6th, 1661) to dinner to Sir Wm. Penn's (his wedding day), "where we had, besides a good chine of beef, and other good cheer, eighteen Mince-pies in a dish,—the number of years that he hath been married." "Mincing of meat in pies," quoth Bacon, "saveth the grinding of the teeth." The Christmas pie of the Restoration Period (seventeenth century) was a noble dish rarely weighing less than fourteen pounds, and often exceeding several stones in weight. The meat ingredients then represented nine-tenths of this minced, or shred pie, with only a flavouring of dried fruits, plums, raisins, and citron peel, which were then expensive luxuries; but nowadays the meat ingredients have shrunk, and shrunk, until only a mere trifle of chopped suet remains as a reminder of the solid fare of a robuster age. The *Pie* is an English institution which when once planted on American soil, forthwith ran rampant, and burst forth into an untold variety of genera, and species. In the City of New York there exists a monster pie-baking company, one of the oldest trusts in the city; tens of thousands of pies (as consumed there daily) are produced at this particular bakery. Each season has its favourite pie, but all the year round Apple pie is well to the fore. Hot pie is the proper thing, according to the judgment of the

pie-men; there is as much difference between a piping-hot luscious Apple pie, fresh from the oven, and a cold edition of the same pie, as there is between wine, and vinegar. After Apple pie, the next favourite, especially at Christmas, is "Mince." Peach, Pine-apple, Lemon Custard, and Cocoanut pies are in demand all the year round. This great Baking Company uses a hundred and ten thousand eggs daily. Huckleberry, Cherry, Cranberry, Pumpkin, Strawberry, Plum, Gooseberry, Currant, and Blackberry pie are in great demand, each in its particular season. "Meringue" is a cold-weather sort of pie, and only a moderate favourite then. The notion that pies properly baked are indigestible is treated by the manager as a delusion exploded long ago by medical authority. The late P. T. Barnum used to eat his three slices a day, and he lived to be eighty-two years of age, being a model of good nature, and shrewd amiability. "My observation is," says the Manager, "that persons who confine themselves to animal food are gross in structure, and intellect. There is no animalism in pie; and your reasonable pie-eater is a man of fine texture physically, and among the stars mentally." Our English fruit pies are not correctly called "tarts"; in the true tart the fruit (or jam) is put within a ring of baked dough, as evolved from the Roman twisted ring called "torte." As long ago as in 1863. *The Lancet* admonished the public concerning Meat pies, in words of warning which are just as necessary now as then for careful heed: "All learned chemists, and toxicologists have to be reminded of the important fact that if a Meat pie is made without a hole in the top crust to let out certain noxious emanations from the meat during cooking, then colic, vomiting, diarrhœa, and other symptoms of poisoning, in more, or less degree, are likely to occur, particularly in pies made of beef, and rabbit. Herring pie was a favourite dish with our ancestors; and from Great Yarmouth a hundred herrings are still sent once a year by the Burgesses to the Sheriff of Norwich to be made into twenty-four pies for the King.

PEACH.

The Apple of Persia is our Peach (*Amygdalus Persica*), which grows on a tree whereof the young branches, leaves, and flowers possess more medicinal properties than the fruit. After being macerated in water they yield a volatile oil which is chemically

identical with that of the bitter almond. The flowers are laxative, and have been used instead of manna. The fruit is wholesome, sub-acid, and luscious, seldom disagreeing if eaten ripe, and sound. Its quantity of sugar is but small, whilst the skin is indigestible. The leaves possess some of the properties of prussic acid, and must be only employed medicinally, and with caution. A syrup of Peach flowers was formerly made officinal by apothecaries. For the colic caused by gravel, Peach-flower tea will allay the pain. Gerarde advises that "a strong infusion of Peach flowers doth singularly well purge the belly, and yet without grief, or trouble,—two tablespoonfuls for a dose."

Peach pie, owing to the abundance of this fruit, is as common fare in an American farmhouse as is apple pie in an English homestead. Our notable King John died at Swinestead Abbey from a surfeit of Peaches, and new ale. The kernels of this fruit, when it is crushed, yield likewise an oil similar to that of bitter almonds, which has proved poisonous to children, also to pet animals on their cracking a Peach stone. In Sicily there is a belief that anyone afflicted with goitre who eats a Peach on the night of St. John, or the Ascension Eve, will be cured, provided only that the Peach tree begins to perish at the same time. Thackeray one day at dessert was taken to task by a colleague of his on the *Punch* staff, Angus B. Reach, whom he addressed as Mr. Reach instead of as (Scotticé) Mr. Re-ack. With ready humour Thackeray replied, "Be good enough, Mr. Re-ack, to pass me a Pe-ack." As containing very little sugar, Peaches are an allowable, and refreshing fruit for diabetic sufferers. Peach-water is a flavouring extract used in cookery, being obtained from the fresh leaves of the tree by bruising them, and mixing the pulp with water, and distilling it. If made in this way it retains the flavour of bitter almonds, and will serve to relieve the nausea of a qualmish stomach when carefully administered. Again, home-made Peach wine, brewed from the sweetened juice of mashed ripe Peaches, together with some of the leaves, is excellent for soothing an irritable stomach in a sensitive weakly person liable to sickness after food; a little cinnamon, and vanilla are added in the making. Take a hundred thoroughly ripe Peaches, skin them, and remove the stones; mash up the fruit in an earthenware dish, and add a pint of water sweetened, with some well-flavoured honey;

pass it through the sieve, and press out the pulp thoroughly; pour all the liquid into an earthenware pitcher; add four pounds of sugar, a quarter of a pound of Peach leaves, a little cinnamon, a little vanilla, and as much in quantity of good white wine as there is of Peach-juice. Allow it to ferment, covering the pitcher well. When the liquid is thoroughly settled, filter, and put it into bottles. Some persons add a bottle of Eau-de-Vie to the mixture, but this is not necessary. The Peach wine made in this way, besides being very agreeable to the taste, is an excellent stomachic, with sedative virtues because of the soupçon of weak prussic acid in the leaves; it will admirably suit a delicate sensitive digestion. Wine of Plums, or of Apricots, may be brewed in a like manner, except that as these fruits are sweeter than the Peach, less sugar need be used. Again, Ratafias, of bitter Almonds, because of the same inherent principle, make a most useful culinary ingredient for puddings, or other plain dishes to suit a qualmish stomach inclined to sickness. Thus: "Put a pint of milk into a basin; add to it two tablespoonfuls of fine sugar, a pinch of salt, and six or seven drops of essence of Ratafias, or of bitter Almonds; beat six eggs for two, or three minutes, and mix them with the milk; pour into a well-buttered mould, and steam for an hour." Peach brandy is a spirituous liquor distilled from the fermented juice of the Peach. For delicate invalids whose appetite must be coaxed, Peach foam is a simple tempting nicety. "Skin, and cut into quarters, three or four choice, and very ripe Peaches, so that when done there shall be a cupful; put them into a basin with half a cupful of powdered sugar, and the white of one egg; beat this mixture with a fork for half an hour, when it will have become a thick, perfectly smooth, velvety cream, with a delightful Peach flavour, and so innocent that it may be eaten almost *ad libitum*." For making Peach jam, thoroughly ripe and sound autumn fruit should be used, as having the best flavour, and most perfume; a few of the stones should be broken, and their kernels, when blanched, be added to the jam, first passed through a hair sieve.

PEAR, (*See* FRUITS).

PEAS, (*See* BEANS).

THE pulses, which include Peas, Beans, and Lentils, have been well described as "the poor man's beef," because of their richness in nitrogenous proteids. They specially acquire this property

through small nodules on their roots which consist of bacterial masses endowed with a remarkable power of fixing the free nitrogen of the atmosphere, and of passing it on for the use of the plant. Kitchen garden Peas, when cooked in the usual way, contain from 12 to 16 per cent of carbohydrates, chiefly sugar. "Hot Grey Pease, and a suck of Bacon," (tied to a string of which the stallkeeper held the other end,) was a popular street cry in the London of James the First. The principal proteid of the pulses is legumin, or vegetable casein; indeed, a kind of cheese may be actually prepared from beans. Pulse is the pottage, or porridge, of this tribe. Some of the proteids of the pulses are rich in sulphur, whereby they provoke flatulence through sulphuretted hydrogen; but these seeds are poor in fat, though thoroughly absorbed as to their flour, or meal, within the intestines. Pea soup, if well prepared, and thick, contains in each tablespoonful the equivalent in proteids of one ounce of meat; by making this soup with milk instead of water the amount of proteid is trebled. But some carbohydrates must be added if the purpose is to satisfy therewith all the requirements of nutrition. These pulses show a deficiency of potash salts compared with their amount of proteids; for meeting which lack, it will answer to add just a little bicarbonate of potash to the water in which they are boiled. Porridge made from Peas ripens, and sweetens, by being kept for little more than a week in a cool place; so that in the quaint old lines concerning it there is shown to be embodied an instructive truth:

> "Pease porridge hot, Pease porridge cold,
> Pease porridge in the pot nine days old."

This maturing takes place on the ensilage principle, and the term of nine days is the limit of time before mouldiness begins.

Peas (*Pisum arvense*) were known to the ancient Greeks, and Romans. Usually the seeds, as contained within the pods, are the only edible part; but the pods themselves of the Sugar Pea, and the String Pea are eaten, as in the case of String Beans. The seeds, when ripe, and hard, are split for use in soups, or are ground into Pease meal. "Yes! yes! madam! I am as like the Duc de Richelieu as two Peas: but then they are two old withered grey Peas" (Walpole's letters, 1765). The poet Cowper reminds us that:—

> "Daniel ate pulse by choice: example rare!
> Heaven blest the youth, and made him fresh, and fair."

"Then said Daniel to Melzar (the steward), whom the prince of the eunuchs had set over Daniel, Hananiah, Mishael, and Azariah, 'Prove thy servants, I beseech thee, ten days, and let them give us pulse to eat, and water to drink; then let our countenances be looked upon before thee, and the countenance of the children that eat of the portion of the King's meat: and as thou seest, deal with thy servants.' So he consented to them in this matter, and proved them ten days. And at the end of ten days their countenances appeared fairer, and fatter in flesh, than all the children which did eat the portion of the King's meat" (Daniel i. *vv.* 11–17).

In Germany Peas are thought good for many complaints, especially for wounds, and bruises. They best suit persons who take plenty of active outdoor exercise. The skins of parched Peas when eaten cooked are apt to remain undigested, and to be passed in the excrements. Pease made into puddings is eaten by the lower classes of most towns, being bought ready prepared at the cooks' shops, a portion thereof wrapped in paper for a penny. In the clever *Book of Nonsense* (1862) it stands related:

"There was an old person of Dean
Who dined on one pea, and one bean;
'For,' he said, 'more than that
Would make me too fat,'
That cautious old person of Dean."

Less nourishing satisfaction is got out of the pulses than from suitable animal food by persons who are not robust, or who do not gain their bread by hard bodily work. Lord Tennyson found such to be the case in his instance, and wrote to this effect as his individual experience (in his dedication of the poem *Tiresias*, to Edward Fitzgerald, a vegetarian), telling disappointedly about meat-abstainers:

"Who live on meal, and milk, and grass;
And once for ten long weeks I tried
Your table of Pythagoras,
And seem'd at first 'a thing enskied'
(As Shakespeare has it): 'airy light
To float above the ways of men';
Then fell from that half-spiritual height
Until I tasted flesh again,
One night when earth was winter black,
And all the heavens were flashed in frost,
And on me, half asleep, came back
That wholesome heat the blood had lost."

PEPPERS.

As to the Latin word "*Piper*" for Pepper, its derivation is said to be from the Greek "*Peperi, quod apricatum,*"—because baked, and dried by the sun. "There is 3 maner of Peper, alle upo' o' tree,—long Peper, blak Peper, and white Peper." The principal kinds (white, and black) are procured from the seed of a small shrub which grows at Malabar, and in various parts of India; for preparing white Pepper the outer husk of this seed is removed. Pepper was known to the ancient Greeks, and was so highly valued in the early centuries of the Christian era that when Alaric besieged Rome (408 A.D.) he included in its ransom three thousand pounds of Pepper. A similar spice is Long Pepper, from the East Indies; its spike has the half-ripe berries attached. This Pepper being not so strong, but more acrid in its effect, has been long used in making medical confections. The seeds of each sort contain an essential oil, and an alkaloid, "piperine," of great power.

Both Hippocrates, and Galen employed Pepper as a medicine, and its culinary use was described by Apicius. Our old English writers make frequent mention of it. For instance, Sir T. Elyot, in the *Castel of Health*, says with respect to this healthful condiment: "The nature of Pepper is that beinge eaten it passes through the bodye, heatying, and comforting the stomacke, not entrynge into the vaynes, or annoyinge the lyuer." The early signification of "to pepper" was to pelt with peppercorns, and to cause smarting of the part hit therewith; this verb was also employed to signify giving a person his quietus, or "doing for him." In *Romeo and Juliet* the term is thus used, "I am peppered, I warrant, for this world."

Grocers as dealers in Pepper were formerly known as peppperers. "On June 12th, 1345, a number of pepperers, as the grocers were then styled, met together at dinner by agreement." Should the stomach feel empty, and, still more, if any dry retching occurs, take bottled porter, and biscuit spread with a little butter, and sprinkled well with Pepper, (white, or Cayenne); "which last article" (as Dr. Chambers advises), "by the way, amply repays the space it will occupy in a traveller's pocket throughout a journey, so useful is it on all occasions." Pepper when powdered is a vigorous stimulant to digestion, but if taken in excess it may inflame the bowels. "When I'm a Duchess,"

said Alice (*in Wonderland*), "I won't have any Pepper in my kitchen at all. Soup does very well without it. Maybe it's always Pepper that makes people hot-tempered; and vinegar that makes them sour; and camomile that makes them bitter; and,—and barley sugar, and such things that make children sweet-tempered. I only wish people knew that!" The cross Duchess had been saying to Alice:—

"I speak severely to my boy,
I beat him when he sneezes,
For he can thoroughly enjoy
The Pepper when he pleases.
Bow! wow! wow!"

The Capsicum, or Bird Pepper, a tropical production now cultivated freely throughout Great Britain as a stove plant, affords us Cayenne Pepper as its fruit pods, to be powdered for the kitchen, and the table. Another variety of this Capsicum is "Chillies." Because thrushes, ruffs, reeves, and other such small birds can eat, and digest the small "Chilli," its berry goes by the name of "*Piment des oiseaux*." The Bird Pepper by its Cayenne exercises important, and useful medicinal actions in culinary forms. Chemically it furnishes an essential oil, with a crystalline principle, "capsicin," of much vigour. The oil may be taken remedially in a dose of from half to one drop, rubbed up with some powdered white sugar, and mixed with a wineglassful of hot water; or an essence may be made for more convenient purposes by mixing certain proportions of the oil, and spirit of wine (one part to nine), so that the dose thereof shall be from five to ten drops in water. If one fluid ounce of this essence is mixed with five fluid ounces of water, a capital Capsicum lotion becomes compounded, which will prove signally useful for relieving externally the variety of lumbago in which there is no tenderness on pressure, but much pain on movement; the lotion should be applied over the loins on a piece of lint, or a folded pocket handkerchief. It is found that shortly after stinging and redness have been produced the patient can move quite freely; though perhaps some hours later a second application may become necessary.

Very remarkable success attends the use of Cayenne Pepper as a substitute for alcohol with hard drinkers, and as a valuable drug in *delirium tremens;* when full doses given repeatedly at

such intervals as seem necessary will reduce the tremor, and agitation within a few hours, causing presently a calm, prolonged sleep; at the same time the skin will become warm, and will perspire naturally; the pulse will subside in quickness, whilst regaining fullness, and volume; the kidneys also, and the bowels will act freely. For an intemperate person who really desires to wean himself from indulging in spirituous liquors, and yet feels to need some other stimulant in place thereof, at first Cayenne Pepper, given in essence, or tincture, mixed with that of bitter orange peel, will answer most effectually, the doses being reduced in strength, and frequency from day to day. But no alcoholic liquor of any sort should be resumed; indeed, there will arise a mortal repugnance thereto. "The feverish remorse," said Charles Lamb, in *Confessions of a Drunkard* (1830), thus felt "were enough to make him clasp his teeth fast together,

> "And not undo 'em,
> To suffer wet damnation to run thro' 'em."

For the racking headache which follows a drinking debauch it is famously effective to drink from time to time a cupful of a strong tea made from the Garden Thyme as grown in the herb bed; its volatile aromatic oil is specifically beneficial for this severe penalty exacted by the overnight indulgence. A tincture of Capsicum is officinal, and may be had of uniform strength from any druggist; sixteen grains of pure good Capsicum powder to each fluid ounce of spirit of wine, macerated, and strained, the dose thereof being from five to twenty drops, with two tablespoonfuls of cold water. For an attack of delirium tremens, beef-tea red-hot with Cayenne Pepper, and with grated Parmesan cheese in it, may be helpfully taken by the patient in frequent copious draughts. While this is so strong, and burning, that under ordinary conditions one would scarcely dare to taste it, yet the patient will pronounce it the most cool, and refreshing drink. Some such a sad, but sagacious rogue must have been the Peter Piper of our young days, who is said to have eaten a "peck of pickled Pepper;" though nursery tradition asks doubtingly whether he did so, or not. John Leech, the talented *Punch* artist, when he died, left behind him forty pairs of trousers, and forty-six pots of Cayenne Pepper!

A much esteemed West Indian dish is Pepperpot, the chief

ingredient being Cassareep (with dried fish, or flesh, and vegetables), which is chiefly the young green pods of the okra, and Chillies; or the said dish is made of tripe shredded, and stewed, to the liquor of which small balls of dough are added, together with a high seasoning of Pepper. This Cassareep, growing abundantly in the West Indies, produces large tubers on its roots which are the source of our tapioca. The name given to such roots is *Jatropha manihot*, as derived from the Greek words *Iatron-phago*, "I eat a cure," expressing the healing, and nutritious properties of this genus. An extract of the "Cassareep" root furnishes the Pepperpot now mentioned. The tubers yield a pulp, a starch, and a milky juice. When the starch, or flour, of the roots is dried on thin hot plates, it constitutes the tapioca of our culinary use. The milky juice is poisonous with prussic acid whilst fresh, but loses its harmful effects after it has been expressed for thirty-six hours, or if it is boiled. When this juice is condensed by heat to a treacle-like extract it becomes Cassareep, being a brown, slightly sweet, aromatic, thick liquid, which will communicate a remarkably savoury taste to meat gravies, particularly in the making of Pepperpot. It should be used in drops, and serves as a capital digestive addition to meat pies. With beef, veal, fowl, rabbit, kidneys, and their pies, the judicious use of Cassareep effects a decided improvement by employing from a teaspoonful to a tablespoonful. The extract must be kept cool, as it is liable to ferment. Cayenne in smaller quantities, whether by infusion in boiling water as a tea, or in the tincture, serves admirably to relieve dragging pains in the loins through a sluggish action of the kidneys. For incipient quinsy, before the tonsillar abscess breaks, a basin of hot gruel well seasoned with Cayenne Pepper, if taken soon enough, will often give ease, and resolve the swelling. In the early part of the last century a medicine of Capsicum powder compounded with table salt was famous for curing a putrid sore throat. Two dessertspoonfuls of small red Chillies (powdered), or three of ordinary Cayenne Pepper were beaten together with two dessertspoonfuls of fine salt into a paste, half a pint of boiling water being next added; then the liquor was strained off when cold, and half a pint of very sharp vinegar was mixed with it; One tablespoonful of this mixture was the dose for an adult every half-hour, or every hour, being diluted with more water if found to be too strong.

A Capsicum gargle of properly modified strength will specially relieve other milder forms of sore, and relaxed throat, by virtue, not only of its stimulating action, but further because possessing an inherent specific medicinal affinity for the throat; which part Sydney Smith apostrophized thus in his own instance :—

> "Much injured organ! constant is thy toil!
> Spits turn to do thee harm, and coppers boil;
> Passion, and punch, and toasted cheese, and paste,
> And all that's said, and swallowed, lay thee waste!"

Under the invocation of Saint Blaize (in whose processions at one time drunkenness prevailed, giving rise to the reproach "drunk as Blazes") a custom has become perpetuated from Italy by the Fathers of Charity, for the blessing of throats. Two candles consecrated on Candlemas Day, being crossed in the form of an X, are placed under the affected person's chin so as to touch the throat, while these words are said: "By the intercession of the Blessed Virgin Mary, through the merits of St. Blaize, Bishop, and Martyr, may our Lord deliver thee from every malady of the throat." Miraculous cures are said to have followed this pious ceremony. Saint Blaize was the patron of wool-combers. Another "sovereign cure for drunkenness, and pleasant withal" is told of by Tuer, in *London Cries*, as having been known by the name of Saloop, which was originally dispensed at street corners, where it was consumed formerly for the most part about the hour of midnight. It eventually found its way into the coffee houses of past times. The ingredients used in preparing this beverage were various, sassafras, and other simples of the cuckoo-flower tribe being the principal among them. This was not the same old English drink as Salep, concocted from the dried tubers of several orchids which were mucilaginous, and demulcent, like sago, or tapioca.

With respect to Peppers, and their allied pungent spices, as desirable aids to digestion, doctors have differed, and still include objectors. Dr. Beaumont said: "These spicy condiments do not afford any nutrition, and their continual use affects the stomach as alcohol, and all other stimulants do; the present relief afforded is at the expense of future suffering." Likewise also Mattieu Williams in his *Chemistry of Cooking*, writes: "Thousands of poor wretches are crawling miserably to their

graves, the victims of the multitude of maladies of both mind, and body, that are connected with chronic incurable dyspepsia brought about by the use of Cayenne, and its condimental cousins."

For catarrh of the stomach which gives distress without feverish disturbance, or for gout of stomach under the like conditions, a tea made by pouring boiling water on sufficient Cayenne Pepper, and drinking half a tumblerful (whilst quite hot) at a time will give relief.

A Capsicum ointment, or Chilli paste, will almost invariably serve to mitigate the painful stiffness of chronic rheumatism if rubbed in topically for ten minutes at a time with a gloved hand. This paste is to be made with "capsicin," the oleo-resin of the pods (half an ounce), and sheep's-wool oil (lanoline), five ounces, melting the latter, and after adding the capsicin letting them be stirred together until cold. Indolent piles which have extruded, and the circulation in which is stagnant, can be stimulated to reduction by the use of this ointment when diluted so as to cause only moderate smarting. At the same time the viands taken at table should be sprinkled with Cayenne Pepper. For a scrofulous discharge from the ears of a child Capsicum tincture, of a weak strength (four drops to a tablespoonful of cold water), injected three times a day, will exercise curative effects. In passive congestion of the eyes through catarrh, or rheumatism, the diluted juice of Capsicum used as a lotion is a sovereign remedy. It will even clear the sight of healthy eyes, but must not be used too strong, only sufficiently so as to produce a temporary smarting. A "poor man's plaster" made of Capsicum extract, or Cayenne Pepper, mixed with melted resin plaster, and then spread on brown paper, is of admirable use in lumbago, and chronic rheumatism; it must be warmed before application. This, and the Chilli paste, excite comforting sensations of warmth in the skin, with redness thereof, but they do not blister it. "I am improved," wrote Sydney Smith to Mrs. Grote, "as to lumbago, but still less upright than Aristides." Unbroken chilblains may be readily cured by rubbing them once a day with a small piece of sponge saturated by a tincture of Cayenne Pepper, until a strong sense of tingling is induced. "The occurrence of chilblains," says Dr. Rabagliati, "is for the most part an indication of overfeeding, or of feeding too often, in much the same way as corns

occur." Again: "Chilblains are half gouty, and therefore yield to friction twice daily with soft soap as an alkali."

In Evelyn's time a Pepper known as Tabasco was used as a condimentary addition to "sallets," being pronounced especially wholesome. This is the *Piper Jamaiciense*, or *Amomum Plinii*, got from a West Indian plant of the Pimento, or Allspice, order. A liquid extract of the Tabasco was used, of which it was said "from three to six drops will animate the whole salad." Allspice tincture, and a cordial Allspice-water are to be had nowadays from our druggists.

PEPPERMINT. *(See* HERBS).

PHEASANT. (*See* GAME).

PHOSPHATES. *(See* ALKALIES, and BREAD).

PIGEON. *(Columba.)*

THE early Romans set a high value on Pigeons, which were known long since, even three thousand years before Christ. Burton, in his *Anatomy of Melancholy*, forbids them as food. "Though these be fair in feathers, and pleasant in taste, and have a good outside (like hypocrites), white in plumes, and soft, their flesh is hard, black, unwholesome, dangerous, melancholy meat." "*Gravant et putrefaciunt stomachum.*" Jeremy Taylor refers to a former custom which prevailed widely of applying Pigeons cut into halves against the soles of the feet in the extremity of a sick person's illness: "We cut living Pigeons in halves, and apply them to the feet of men in fevers."

"Spirante columbâ
Supposita pedibus revocantur ad ima vapores."

Pepys, in his *Diary*, quotes repeated instances of the same practice during the seventeenth century; he also tells that (September 26th, 1668) "Mr. Beale, of the King's Guards, sat with him while he had two quilted Pigeons, very handsome, and good meat." "A corrected Pigeon," quoth Fuller, "that is, with blood let under both wings, is both pleasant, and wholesome nourishment; they are generally reported without gall; but their bills can peck as well as kiss, and if their crops be not clearly drawn their flesh is bitter." Split Pigeons have been laid also on the breast for giving relief in asthma, either by a

natural cessation of the paroxysm, or merely as the effect of warmth. "Pigeons are good for old men, and verie wholesome for them that bee phlegmaticke; being boyled they are wholesome enough for all hot, and cholericke bodies, because the heat of them is tempered by the moysture of the water; they are most convenient for cold seasons. It is very good when you eat them rosted to stuffe them with sour grapes, or unripe gooseberries, and to eat with them the soure grapes, or berries, in the manner of a sauce, with butter, and a little vinegar also. The eating of Pigeons in the time of the Plague is much commended because they are thought to make men safe from infection; which thing verily is not repugnant to reason, for they breed a strong, hot, and somewhat thicke bloud" (Dr. T. Venner). When Pigeons are fresh they have their full flavour, but it disappears entirely if they are kept after being killed for the table, and the slightest *haut gout* makes them useless for food. They should therefore be roasted as soon as they are received; and, if not used immediately, they should be kept in the roasted state cold, and be heated again when wanted. Stewed Pigeon is a useful dish for a delicate sick person; it admits of many variations, and is supreme with stewed young green peas. Tennyson tells of a certain toothsome, and tempting Pigeon pie, served at Audrey Court, during a pic-nic gathering:—

"There on a slope of orchard Francis laid
A damask napkin, wrought with horse, and hound:
Brought out a dusky loaf that smelt of home,
And, half cut down, a pasty, costly made,
Where quail, and pigeon, leek, and leveret lay,
Like fossils of the rock, with golden yolks
Imbedded, and injellied; last, with these
A flask of cider from his father's vats,
Prime, which I knew; and some sat, and eat,
And talked old matters over."

Pigeon's blood has long been thought good for complaints of the eyes; some drops of blood withdrawn from under a Pigeon's wing, if let fall on a wounded eye, would cure the sore.

PINE APPLE (*and see* FRUIT).

FROM the *Ananas sativa*, a native tropical tree in South America, the Pine-apple has been obtained. It is cultivated

in England as a hot-house plant (formerly by few growers only, but now more commonly), whilst a large importation of the foreign fruit takes place. Fresh Pine-apple juice has been recently found to possess remarkable digestive powers as exercised upon animal food, similar to those of the gastric juice within the stomach. The active principle of the Pine-apple is "bromelin," which is potential enough to digest a thousand times its own weight of proteids within a few hours. Upon the coagulated white of egg the digestive process induced is slow; while on the albumin of meat its action is first to produce a pulpy, gelatinous mass, which after a time completely dissolves. When a slice of Pine-apple is placed upon a raw beef-steak, the surface of the fresh steak becomes gradually gelatinous, owing to the digestive action of the enzyme of the juice. An average Pine-apple will yield more than half a pint of juice. The activity of this digestive agent becomes destroyed in a cooked Pine-apple; but there is no reason why the tinned fruit (unless prepared under heat) should not retain the said digestive power; of which the principle may be obtained from the juice by dissolving therein a liberal quantity of common salt; then a precipitate is obtained which includes the remarkable digestive agent; whilst the woody fibre, which is indigestible, should be rejected when eating Pine-apple, or expressing its juice. Pine-apple juice from the ripe fruit is decidedly acid; its digestive principle, "bromelin," is very unstable, and therefore of limited commercial use; if applied to horny excrescences on the skin, such as corns, or warts, the fresh fruit juice is powerfully solvent; so that if a thin slice of Pine-apple be kept in close contact with a corn for eight hours the corn will become so soft as to admit of easy removal. The natives of Pine-apple-growing countries are found to derive much relief from the external application of the juice in cases of leprosy, and elephantiasis. The Pine-apple is pulled into pieces, and their fresh raw surfaces are rubbed over the affected parts of the skin. Again, it is asserted that for breaking up, and resolving the tough membranous exudation which forms obstructively within a diphtheritic throat, nothing is so surely effectual as the juice squeezed from a ripe Pine-apple; by this means many a life has been saved. Three ounces of fresh Pine-apple juice will dissolve from ten to fifteen grains of albumin in four hours; on which principle the juice is employed in America for applying to the leathery false membranes which

obstruct the throat in diphtheria; it is also anti-scorbutic, and excellent for other forms of sore throat.

The essential volatile oil of Pine-apple, on which its characteristic flavour depends, is chemically ethyl butyrate. This particular flavour is frequently imparted to rum as a spirit by adding some slices of Pine-apple; which special spirit through such chemical flavouring augments the amount of carbonic acid exhaled from the lungs, though all other alcoholic beverages retard such expiration. "This particular 'vanity' (as Mr. Stiggins denominated 'the liquor called rum') not being allowed to be sold in that 'ere establishment—the Fleet Prison, Clare Market,—Mrs. Weller recommended a bottle of Port wine, warmed with water, and with spice, and sugar, as being grateful to the stomach, and savouring less of 'vanity' than many other compounds." For "Rum Punch Syrup": "Take a quart of rum, half a pint of fresh lemon-juice, and two pounds of sugar (clarified); pour into this the lemon-juice, and stir it up until it simmers; then take the pan off the fire, and pour the syrup into a porcelain dish. When it is cold, add the rum, and stir well up, and put into bottles. This syrup keeps well. Some of it can be made into Punch when required by adding a sufficient quantity of boiling water; or it may be mixed with tea."

Rum is a spirit much favoured in Yorkshire, particularly at funerals, when the "baked meats are coldly furnished forth." On the occasion of Ephraim Shackleton's wife's burial at Ling Crag "there was no stint of drink, or victuals at the Trawdon Inn. First, there was Rum for such as cared to take it; and the women—their faces showing red against black-bordered handkerchiefs—were no less willing than the men. Tongues began to wag; and the dead woman's virtues mellowed as the glasses went their round, and the hour for tea grew near. It was a gallant meal enough—ham, and cheese, and spiced loaf; strange cakes, of different shapes, and colours; mince-pies left over from the Christmas junketings; tea for the ostensible drink, but with it little pots of Rum that served as a second kind of cream for most of the sombre-gowned, bright company" (*Through Sorrow's Gates*, 1904).

A beef-meal powder, wherein the Pine-apple juice has predigested the beef to a considerable extent, is now an excellent, and reliable article of commerce for the invalid. Happily the ferment of Pine-apple, when acting upon animal substance

digestively, does not cause any bitter by-products to be formed, so that the beef meal is of acceptable taste, as well as of high nutritive value. The solvent digestive powers of Pine-apple juice are efficient both in the acid stomach, and in the alkaline intestines,—that is, throughout the whole alimentary canal. A slice of fresh Pine-apple is about as wise a thing as one can take by way of dessert after a substantial meal. Nearly twenty-five million Pine-apples are marketed yearly in the United States, Cuba being the principal producer, Florida sending about half as many, and the Bahamas a considerable quantity. For Pine-apple jam: "Take equal weights of the fruit, and of sugar (making a syrup of this,—a cup of water to a cup of sugar); peel, and slice the Pine-apple, and preserve it in the syrup. The juice of a lemon may be added after it is finished, which takes about three hours." Or, again: "Pare the fruit, and carefully take out the eyes; then grate it on a coarse grater, rejecting the cones; weigh it, and for each pound of fruit take a pound of sugar, sprinkling it over the grated Pines; then let it stand all night; in the morning boil for ten, or fifteen minutes over a quick fire; put into glass pots, and cover them when cool." For Pine-apple fingers, which are delicious (Dutch): "Bake a batch of slightly-sweetened midget milk rolls; chop off the end crust of each, hollowing out the interior; next take a tin of preserved Pine-apple, and chop the fruit up finely, picking out all the hard bits, or stringy fibres, and pound it to a pulp with a little thick cream, adding a tablespoonful of grated almonds to each teacupful of the paste. Fill the cases with this mixture; bind on the tops with a glue composed of the white of egg, and pile on a dish (decorated with a lace-edged d'oyley, and natural flowers)."

"When Alice" (*in Wonderland*) "popped into the Rabbit hole after the white Rabbit with pink eyes, she kept falling, falling, falling down a well ever so deep, until suddenly thump, thump, down she came upon a heap of sticks, and dry leaves, and the fall was over. On a three-legged glass table in a long, low hall lit by lamps she found a little bottle, round the neck of which was a paper label with the words 'drink me' beautifully printed on it. The bottle was *not* marked 'poison,' so Alice ventured to taste it, and, finding it very nice (it had, in fact, a sort of mixed flavour of cherry tart, custard, Pine-apple, roast turkey, toffee, and hot buttered toast), she very soon finished it off."

PLUMS.

THE Sloe, or wild Plum, borne by our Blackthorn of the hedgerows, is well known as an oval, blue-black, small fruit, of autumn produce, harsh, and sour until mellowed by the early frosts. Its dark ruby juice enters largely into the manufacture of British Port wine. If obtained by expression of the Sloes this juice is very useful as an astringent medicine, and is a popular remedy for stopping nose-bleeding. Country people bury the Sloes in jars to preserve them for winter use; they should be gathered on a dry day, picked clean, and put into jars, or bottles, without any boiling, or other such process, and then covered with loaf sugar; a tablespoonful of brandy should be presently added, and the jar sealed. By Christmas the syrup formed by the juice, the sugar, and the spirit, will have covered, and saturated the fruit; so that then a couple of tablespoonfuls will not only serve as an agreeable dessert liqueur, but will further act as an astringent cordial of a very useful sort. The Sloe bush is often called provincially "Scroggs." Sloe leaves, when they unfold late in the spring, will, if dried, make a very good substitute for foreign tea. The blossoms answer for preparing a safe, harmless, laxative syrup excellent for children; by taking a spoonful or two daily for three, or four days, costiveness will be overcome gently, and painlessly, but thoroughly.

The hard, round Bullace (*Prunus insititia*) grows likewise in our English hedgerows, this being the fruit (five times as big as the Sloe) of a shrub having fewer thorns. Country folk make therefrom Bullace wine; and boys in France call both fruits (equally astringent) "Sibarelles," because it is so difficult to whistle immediately after masticating them. Wild Plums in Devonshire are Kestings, or Gristlings.

The cultivated Plum has been developed from the Sloe, and wild Plum; its Damson variety being formerly the fruit product of Damascus, (*Damascenes*). When ripe the cultivated Plums are cooling, and slightly laxative, especially the French fruit, which is dried, and bottled for dessert. Philip Dormer, the famous Lord Chesterfield, in one of the well-known letters to his son then at Paris (1757), told him: "Lord Bacon, who was a very *great* physician in both senses of the word, hath this aphorism in his essay on 'Health': '*Nihil magis ad sanitatem tribuit quam crebræ et domesticæ purgationes*'; by *domesticæ*

he means those simple uncombined purgatives which everybody can administer to themselves, such as stewed prunes, chewing a little rhubarb, or dissolving an ounce and a half of sweet manna in fair water, with the juice of a lemon to make it palatable." In common with Pine-apple juice, and that of figs, the pulp of Plums possesses a peptic ferment which will help the digestion of milk, cheese, and light meats, materially. This fruit is useful for costive habits if made into an electuary, or simple jam; but when unripe, Plums provoke choleraic diarrhœa. The garden sorts contain less sugar than cherries, but a considerable amount of gelatinizing pectose. Lately the superintendent physician of a Reformatory at Chicago found that the boys behaved themselves much better when taking prunes in their diet than at any other time; these act, as he supposes, on certain organic parts which are the seats, and centres of the passions. "Little Jack Horner," says the familiar Nursery Rhyme, "sat in a corner, eating a Christmas pie: he put in his thumb, and he pulled out a Plum, and said 'What a good boy am I!'"

"Inquit, et unum extrahens prunum,
"Horner, quam fueris nobile pueris
Exemplar imitabile!"

Culpeper has said, "All Plumbs are under Venus, and are like women,—some better, some worse." French Plums are conveyed to England in their dried state from Marseilles, the sweetness having been developed by drying. "Prune butter" may be made, without any .sugar, by passing the stewed fruit through a colander so as to remove the skins. Prunes can be taken with benefit at breakfast for correcting a disposition to acid dyspepsia. They contain 2 per cent of proteid, 74 per cent of carbohydrates, 4 per cent of mineral salts, and 18 per cent of water. In cookery Prunes are stewed for a sauce, or otherwise prepared, being nutritious, demulcent, and in a measure laxative. For drying them, at first the fruit is dipped into hot liquid so as to crack their sides, and then dipped into cold water, being left on trays when taken out, so as to mature in the sun for four, or five days; they are finally picked according to size. A *Prune Mould*, excellent against habitual constipation, and beneficial for weakly invalids, is to be made thus: "Put half a pound of Prunes in a stewpan, with a pint of water, and six ounces of sugar; stew slowly until tender; pass through a fine sieve.

keeping back the stones; add gelatine (one ounce dissolved in half a pint of water); mix thoroughly, and boil for ten minutes; put into a border mould in a cool place until set, and turn out (with whipped cream in the middle if the same is approved of for the patient)." "The Damask Prune" (*Castle of Health*) "rather bindeth than lowseth, and is more commodious unto the stomacke." Long ago Andrew Borde (1562) has declared that "Syxe, or sewen Damysens eaten before dyner be good to prouoke a manne's appetyde." For costive persons Prunes may be taken stewed with meat. Dr. Johnson was particularly fond of veal pie with stewed Plums. Plum pudding, so called, our national accompaniment to the Roast Beef of old England, is made rather of raisins, which are dried grapes, than of Plums. In the Western counties it goes by the name of figgy pudding. "Now awl tha vokes be agon tü races, us'll ave a frawsy awl tü ourzels! whot shall us 'ave?" "Aw, let's av a fowel, an' a figgy pudden." Plum pudding is safe food for all except the very weakest of stomachs; the long process of boiling helps to make its ingredients digestible, whilst of themselves they are certainly not unwholesome. None the less, it should always be borne in mind that the questionableness of this good cheer lies more in quantity than in quality. Made almost sacred is the sweet Plum, or Prune, by the Poet Cowper in his tender, and touching "Lines to my Mother's Picture," bearing reference to the loving home-days of his fostered childhood:—

"The record fair
That mem'ry keeps of all thy kindness there:
Thy nightly visits to my chamber made
That thou might'st know me safe, and warmly laid:
Thy morning bounties ere I left my home,
The biscuit, or *Confectionery Plum*;
The fragrant waters on my cheeks bestow'd
By thy own hand, till fresh they shone, and glow'd."

"Think what London would be," wrote Horace Walpole (1743) to a namesake, "if the chief houses were in it as in the cities in other countries, and not disposed *like great rarity Plums in a vast pudding of country!* Well! it is a tolerable place as it is. Were I a physician I would prescribe nothing but 'Recipe: Londin, ccclxv drachmas.' Would you know why I like London so much? Why, if the world must consist of so many fools as it does, I choose to take them in the gross, and not made into separate pills, as they are prepared in the country."

"If pills were pleasant," says an old adage, "they would need no gilding." Dr. Johnson likewise was an ardent lover of London.

PORK. (*See* BACON).

POTATO.

OUR invaluable Potato, which enters so largely into the dietary of all classes, claims consideration here chiefly as regards its curative uses, and medicinal capabilities. It belongs to the natural order of Solanaceous plants, so called because of their sedative properties tending "solare," to lull pain, though poisonous. The underground tubers, or starch stores, of the Potato plant are its edible parts, whilst the stalks, leaves, and green berries share the narcotic, and noxious attributes of this Nightshade (solanaceous) tribe. No daylight reaches the underground tubers so as to develop any poisonous tendencies therein. But the young shoots derive solanin from the early tubers; and in spring time young green Potatoes, if exposed to daylight, are made poisonous thereby, and have a disagreeable taste. There are two sorts of Potato tubers,—the red, and the white. A roasted Potato takes two hours to digest; a boiled one three hours and a half. Chemically the Potato contains citric acid, like that of the lemon, this being of admirable use against scurvy, or rickets in children; likewise salts of potash, which have a similar beneficial action; also phosphoric acid, yielding phosphorus in a quantity less only than what is afforded by the apple, and by wheat. It is of the first importance that the potash salts should be retained by the Potato during its cooking, and therefore the tubers must be steamed in their jackets; else, if peeled, and then steamed, they lose respectively 7 and 5 per cent of potash, and phosphoric acid; if boiled after peeling they lose as much as 33 per cent of potash, and 23 per cent of phosphoric acid. It is evident that the tough skin of the Potato must resist the escape of the potash salts into the water, though it may not completely prevent it. The bursting of the skin occurs only at quite the latter stage of the cookery. Potatoes are deficient in albuminoids, and phosphates. Small Potatoes were Athenians' "meat." But, as regards Potatoes of good quality, and skilfully cooked, "picture to yourself the 'ball of

flour,' as old-fashioned housewives call it, "lying in the dish, perfectly steamed, diffusing the softest, subtlest aroma, ready to crumble, all but to melt, so soon as it is touched. Recall the gust, and its after-gust, blending so consummately with that of the joint, hot, or cold. Then think of this same Potato cooked in any other way, and what sadness will come upon you! As for '*pommes de terre sautés*,' '*pommes de terre Lyonnaise*,' '*pommes de terre frites*,' can any of these compare with the 'plain ball of flour' for a moment?" "The roots" (tubers), says Gerarde, "were forbidden in Burgundy, for that they were persuaded the too frequent use of them causeth the leprosie." But it is now believed that the Potato has had much to do with banishing leprosy from England. The said affliction has become restricted to countries where the Potato is not grown. The peel, or rind, of a Potato contains the poisonous substance known as "solanin," which is dissipated, and rendered inert therein when the whole unpeeled Potato is boiled, baked, or steamed; also dry heat serves to destroy it. Stupes of hot Potato-water obtained in this way are of external service in some forms of painful rheumatism. To make a decoction for such purpose, boil one pound of Potatoes in their coats, but each divided into four quarters, in two pints of water slowly down to one pint; then foment the swollen, and tender parts with this decoction as hot as it can be borne. Puerile as it may seem, the carriage of a small raw potato in the trouser's pocket, or beneath the breast of a woman's dress, has been often found to prevent rheumatism in a person predisposed thereto,—probably in a measure because of the sulphur which is present in the tuber, and of the narcotic principles present in the peel. Ladies in former times had their dresses supplied with special little bags, or pockets, in which to carry one, or more small, raw Potatoes about their person, for avoiding rheumatism. If peeled, and pounded in a mortar, uncooked Potatoes applied cold make a very soothing cataplasm to parts which have been scalded, or burnt. These tubers are composed mainly of starch, which as a food affords elements for fatness, and for maintaining the animal warmth of the body; but the proportion of muscle-forming nourishment is but small; so that in this respect as much as ten and a half pounds of the tubers are required to equal one pound of butcher's meat as to proteid value. The Irish believe that an abundant Potato diet promotes fertility.

New Potatoes do not as yet furnish citric acid; their starch is immature, and not readily acted on by the saliva in the mouth during mastication. "The man of superior intellect," said Tennyson (justifying his love of boiled beef with new Potatoes), "knows what is good to eat." Likewise "think of the said new Potatoes! Our cook when dressing them puts into the saucepan a sprig of green mint. This is genius! No otherwise could the flavour of the vegetable be so perfectly, yet so delicately empha-sized! The mint is there, and we know it; yet our palate knows only the young Potato" (H. Ryecroft). By fermentation fully-grown Potatoes, through their starch undergoing conversion into sugar, yield a wine from which may be distilled Potato-spirit, with a volatile oil therein called by the Germans *Fuselol.* This is nauseous, and causes a heavy headache, with indigestion, and biliary disturbance, together with nervous tremors. Chemically it is amylic ether, being oily in appearance, with a strong smell, and an acrid taste. Because Potatoes, when coming into contact with yeast, undergo fermentation, they are employed by bakers in making bread, and increasing its aeration,—one peck of the "fruit" to each sack of flour. By the Bread Acts of 1822, and 1833, which are still in force, it remains imperative that "every person who shall make for sale, or sell, or expose for sale any bread made wholly, or partially of peas, or beans, or *Potatoes*, or any sort of corn or grain other than wheat, shall cause all such bread to be marked with a large Roman M, signifying 'mixture,' (also 'mysteries')." "It would be well, therefore," says *The Lancet* (1903), "to occasionally examine all loaves for this imprint." Sydney Smith wrote alliteratively:

> "Two large Potatoes passed through kitchen sieve
> Unwonted softness to a salad give."

And Sir Thomas Overbury said wittily about a dolt who took credit for the merits of his ancestors, "Like the Potato, all that was good about him was underground."

For making Stovies, or Stove Potatoes, called in Scotland Stove-tarties: "Peel a dozen Potatoes, and cut them up, not too small, but as near as may be into equal pieces; in a flat stewpan put two tablespoonfuls of good, clear beef dripping; add two large onions (sliced), then the Potatoes, pepper, and salt, and a spoonful or two of cold water; shut down tightly; shake occasionally; and if they become too dry add a little more water. The Potatoes should not be allowed to mash, but

should have some formation left when dished up." This is a famous dish with the cottagers on Deeside, and when once done the pan is drawn to the side of the large wood fire, and is ready for all comers; slow cooking is essential. For "Golden Potatoes," take some cold, boiled, new Potatoes, dip them into egg, and bread-crumb, and fry a golden brown; sprinkle with chopped parsley. These go well with bacon at breakfast for supplying animal warmth, and fat, to a consumptive, or attenuated invalid. For a Potato pudding (*Roly-poly*): "Take a pint of hot mashed Potato, a pint of flour, a quarter of a pound of butter, a pinch of salt, and moisten with water, or milk, into a dough; roll the paste out, and spread it with any jam which has no stones; roll, and tie up, and steam for an hour and a quarter." A very nice sauce to eat with this dainty pudding may consist of "two ounces of butter, and two tablespoonfuls of sugar, beaten together, and added to one well-whipped egg; go on beating, whilst pouring in by degrees a little boiling water till the sauce looks like cream."

Potato cream is a capital help for children towards preventing rickets, or scorbutic troubles; this may be made by passing thoroughly-steamed Potatoes through a fine sieve, and intimately mixing the floury material thus obtained, with milk until it has the consistence of cream. From a teaspoonful to a tablespoonful of such mixture may be added to the contents of an infant's feeding-bottle, increasing the quantity according to the age of the child. The bending of leg bones, and spine, which characterizes rickets in children, is usually ascribed to a deficiency of phosphate of lime, and potash, in the food, but this is not wholly the cause; there is, furthermore, an underlying constitutional defect for assimilating the mineral substances necessary to produce healthy growth of the bones. Children with rickets require during their second year such nourishment as scraped raw beef, marrow, cream, and whey (in which all the phosphates are retained). Potatoes never cause rheumatism by provoking acidity; on the contrary, their potash salts tend to prevent it.

For the sleeplessness of nervous indigestion, to take for supper a steamed good-sized Potato, masticating also (though without swallowing) its cooked coat, will often prove a successful soporific. In the most modern treatment of diabetes Potatoes are allowed, it being found that they cause less glucose (grape sugar) to occur as found in the urine than an equivalent quantity of wheaten

bread. M. Mossé, at the French Academy of Medicine, goes so far as to recommend the use by diabetic patients of Potatoes, to the amount of two, or three, pounds daily. If thus substituted for bread they diminish the amount of eliminated sugar, also the quantity of urine passed, and the degree of thirst which is suffered, whilst the general health improves, and any surgical wounds heal kindly. In the cases of arthritic diabetes of elderly patients the Potato diet is something more than a properly assimilated form of food, since it exercises a decidedly curative effect. This effect M. Mossé attributes to the considerable quantity of alkaline salts, chiefly those of potash, contained in the tubers. But mashed Potatoes have the disadvantage of not being masticated sufficiently for the saliva to change the starches into dextrin. The experimental allowing of potatoes among their foods may be safely commended for diabetic patients who have arrived at such a stage in their treatment that they may be permitted to take a certain amount of starch elements, and sugar, but cannot tolerate bread. Sir James Sawyer (Birmingham, 1904) says: "My own experience in practice during the last two years is confirmatory of Mossé's conclusions. I think it will be found that the permission of Potatoes in the food of diabetics is one of the greatest dietetic advances of our times. But the vegetable should be cooked in a particular way, that is, baked in their skins for choice, or by steaming with their 'skin' on; otherwise large proportions of the potash, and of the phosphoric acid will be lost." (We would suggest that very probably the narcotic properties of the skin, which are indisputable, exercise an important auxiliary effect.) Sir James goes on to propose the use of Potato flour (of properly-cooked tubers) instead of grain flour for making the bread, cakes, and biscuits of diabetic patients. Excellent, and delicious cakes can be contrived from paste made by rubbing down Potatoes cooked as enjoined, and blended with cream, or butter. Likewise for *Bran and Potato Bread:* "Take half a pound of flour of steamed Potatoes, a quarter of a pound of bran, half an ounce of German yeast, half an ounce of butter, and one egg. Twenty-four hours before making the dough cook the Potatoes by steaming them in their jackets; then peel, and break them up into flour with the fingers; mix all the ingredients together, and let the paste stand near the fire for an hour to 'rise'; then bake in a greased tin for an hour and a half."

When reaching the intestines Potatoes are as a whole very well absorbed, since they contain chiefly starch, and very little cellulose. Boiling robs them of much of their mineral ingredients, also of some of the proteids which they so scantily contain. The fibro-vascular layer immediately beneath the skin is richer in mineral, and proteid matters than is the flesh of the Potato; so that in peeling this off with the rind the said valuable ingredients are lost. The richer a Potato is in proteids the more waxy it becomes when cooked, because the coagulated proteid solidifies the structure. The starch grains of the Potato are specially ready to undergo fermentation, therefore these tubers as food are to be specially avoided in some morbid conditions of the digestive organs, such, for example, as that of a dilated stomach. Part of the mineral bases are combined with citric acid. "It has been calculated that if a bushel of Potatoes were peeled, and soaked in water, before being boiled, the loss of nutrients would be nearly equivalent to the amount thereof contained in one pound of beef-steak"; so Dr. Hutchison teaches us. With regard to the question of permitting diabetic patients to eat Potatoes, it should be remembered that these tubers contain only about one-third as much starch as bread does, so that they may be given more safely than bread. If Potatoes seem to cause drowsiness they should be first boiled for about five minutes, and then put into fresh boiling water, the first water being thrown away. Two medium-sized Potatoes, when steamed, or boiled in the usual manner, remain for two, or two and a half hours in the stomach; that is, a shorter time than a similar weight of bread. Dr. King Chambers advised "the Invalid's Mashed Potato": "Steam one pound of Potatoes, with their jackets on, until they are mealy; peel them, and rub them through a wire sieve; when cool, add a small teacupful of fresh cream, and a little salt, beating the mash lightly up as you go on until it is quite smooth, and then warming it gently for use." Scotch folk call this homely dish "Champit tatties."

Potatoes, though less nutritious than oatmeal, are more easily digested: and an excellent cheese porridge, or cheese pudding, may be made by adding cheese to baked Potatoes (baked being said advisedly rather than boiled, because then none of the original saline constituents are lost as they are in boiling),' as including all the valuable mineral additions of which

the cheese stands in need. Apples are excellent for the brain, and intellectual writers should take them freely; but Potatoes, on the contrary, make one dull, peevish, and lazy, if eaten constantly, or in excess. "Amongst foods proper for boys may be well included" writes Mr. Miles, "Potatoes, baked with sage, and onion. Take two large Potatoes, six onions of good size, two ounces of butter, two teaspoonfuls of powdered sage, and one ounce of bread-crumbs. Peel the Potatoes, and cut them lengthways into slices about half an inch thick; place six of these slices in a baking tin, or dish, which has been well greased with an ounce and a half of butter. In the meantime peel, and boil the onions for a quarter of an hour in a little salted water, and the sage (tied in a small muslin bag) together with them for the last five minutes. Chop the onions, and sage, and mix with the bread-crumbs, and half an ounce of butter, and spread the mixture thickly over the slices of Potato; then bake for one hour."

A Potato scoop was formerly a hand-implement in the form of a grated shovel for taking up Potatoes which had been first unearthed by a Potato-digger; the soil slips through the grated bars, which detain the tubers. The Irish peasant, who lives chiefly on Potatoes, has to take so much in bulk for obtaining adequate nourishment, that he gets the so-called Potato-belly. Because of their decided alkaline properties, and action, Potatoes are to be commended in a simple form at breakfast for gouty persons. The excretion of urates occurs more actively during the morning hours than throughout the rest of the day, and therefore corrective alkaline food is especially desirable at the first meal. But the Potatoes must not be fried in fat, or otherwise made indigestible merely to please the appetite. Plain *Kegeree*, (prepared with boiled mealy Potato instead of rice,) Potato snow, Potato bread, and Potato purée, are suitable dishes for this purpose; likewise eggs, and Potatoes. "Boil seven, or eight floury Potatoes, and mash them while quite hot; add one ounce of butter, the yolk of an egg, pepper, and salt; also, if liked, a little pounded onion, and some boiled, minced parsley. Roll the Potatoes into egg-like shape, brush them over with beaten egg, and cover with fine bread-crumbs well seasoned with salt, and white pepper; put them into the oven to brown (not frying them). The Potatoes should be boiled for half an hour, allowing one pound of these for three persons.

PRESERVATIVES.

Respecting *Milk* when turning sour, and its treatment by unscrupulous persons to arrest the sourness artificially, an explicit mention has been already made here. The preservatives employed for such a purpose, and for other similar ends, are salicylic acid, borax, boracic acid, and formalin, these being germ-destroyers, but at the same time strong, and mischievous drugs. The sulphites, and fluorides are also brought into use nowadays for keeping meat, and game, from becoming putrid when stale. Borax, and boracic acid, if introduced into the human system through milk, meat, game, or fish, tend to liquefy the blood, and to act as poisons; furthermore, boric acid will cause baldness, besides grievously impairing the digestion. Benzoic acid, another of these preservatives, induces gastric catarrh; plants watered with a solution of it wither away. In larger doses it will produce vomiting, and acute inflammation of the kidneys, which have to eliminate the poison. Physicians are inclined at the present time to believe that the widespread, and wholesale consumption of this preservative with beer, cider, canned goods, etc., is to be held accountable for the increasing prevalence of Bright's disease (albuminuria) in the United States of America. All these preservatives, whilst obviating the growth of micro-organisms in the food-substances to which they are heedlessly added, and so preventing manifest decomposition therein, also check the development of wholesome digestive ferments, and thus materially lessen the digestibility of the foods with which they are served; consumers will do well to remember this physiological fact. Whatever drug hinders fermentation, whether such drug be antiseptic, or disinfectant, it also cripples digestion, which is in itself much of a fermentative process. The habitual use of foods containing either antiseptics or preservatives of the character just described, will invariably result in stomachic, and intestinal derangements. Good milk, sweet butter, sound beer, and pure wine can be secured without the injurious addition of antiseptics to these essential articles of daily nourishment. Nearly all of the said modern preservatives are based chemically on methylal, or formaldehyde, both of which are useful antiseptics for disinfecting, and of value also for embalming dead human bodies, but not desirable for making mummies of living persons. The use of milk

preserved by such adulterants invariably leads to disorders of the abdominal organs. If the practice is continued for years, as is often the case, these disorders may become of a fatal nature ; for, what is more probable than that the continual irritation of the delicate lining membranes of the alimentary canal by these poisons should lead to lesions resulting (as doctors testify) in malignant growths about the stomach, or its outlet, the pylorus ?

Again, salicylic acid, from the Winter Green, or the Willow, has been long employed for giving a fictitious age to beer by taking away the rawness thereof when newly-brewed. But of late years salicylic acid has come into further uses than for alcoholic adulterations. Preserved foods of various kinds are adulterated with this salicylic acid, whilst jams, and jellies are treated with glucose. The manufacturers who sell these compounds assure us that they are harmless : they declare that salicylic acid is known to be "good for rheumatism" ; also that glycerine is chemically made within the human stomach during the process of digestion, so how can it be harmful ? Speaking chemically these assertions may be supported, but practically they are false. It is true that salicylic acid is used by doctors for treating rheumatism ; but it is administered cautiously by physicians, otherwise they find the heart's action becomes irregular, or the digestion suffers severely. And if this is the experience of watchful doctors, who can withhold the drug directly unfavourable results begin to attend its use, how can food manufacturers expect to give an unsuspecting purchaser salicylic acid with his dinner repeatedly, and without any watchful supervision, and yet avoid doing him grave mischief ? And the same mode of reasoning holds good with regard to glucose. It is true theoretically that during digestion starchy foods become transformed into glucose, and onwards into dextrin. But it is also true that the glucose produced in the human economy differs from commercial glucose in some way yet undiscovered. The fact remains, nevertheless, that commercial glucose causes the human subject to suffer severely. And these are the serious risks which a large number of persons now run. Countless men and women complain of never feeling quite well, of nervous prostration, of headache, and of all the long line of ailments, which the circumspect doctor knows to be the effect of a slow, and cumulative poisoning, due mainly to the adulteration of

foods. Furthermore, as already said, the question naturally presents itself as to how far the growing prevalence of appendicitis to a most alarming extent, both in this, and in other countries, may be mainly due to the same pernicious causes.

PUDDINGS. (*See* PASTRY).

IT is to be always remembered that solid Puddings are "filling at the price," needing a good power of digestion, and only to be partaken of in moderation, especially when coming after substantial meat. That "Too much Pudding will choke a dog" is a familiar adage conveying a homely truth; and that "Cold Pudding will settle your love" carries its own plain moral. Nevertheless, it is equally true that "Solid Pudding is better than empty praise." After all said and done, a practical cook shrewdly sums the matter up thus:—

> "Oh, bother your books, and all their receipting,
> The proof of the pudding lies most in the eating."

During the first quarter of the past century, meat was a food-stuff seldom tasted by English cottagers,—not more often than five, or six times in a year. Beef-steak Pudding was a dish in which they indulged, but only when this was filled with onions in place of beef; or, except when some more affluent neighbour had been making "beef-tea" for an invalid, so that they could beg the spent beef, to concoct what they called with grim humour a "tea-leaves dumpling." Our English national dish, Plum-Pudding, was first known as Plum Porridge, being then compounded as described in *Kitchen Physic*. "On Christmas Day (1662)," as Pepys relates, "I dined by my wife's bedside with great content, having a mess of brave Plum Porridge, and a roasted pullet for dinner, and I sent for a mince-pie abroad, my wife not being well to make any herself yet."

QUAILS. (*See* GAME).

QUINCE. (*See* MARMALADE).

RABBIT. (*See* GAME).

IN *Kitchen Physic* a curious notion about a rabbit-product is recorded which will bear repeating, because it certainly courts further investigation. Dr. Burnett has given the case of an

intelligent lady, of about sixty years, who had lost the sight of her right eye by cataract, and was beginning to lose that likewise of her left eye. She consulted several of the most noted specialist eye doctors of Philadelphia, who all pronounced cataract to be present, and agreed that nothing but operative measures could restore her vision. But an old woman told her to apply oil from a rabbit to her eyes, which she did twice a day. After six months her sight had become completely restored, and all signs of cataract had disappeared, so that she could read without glasses, which she had not done for many years. She complained at first of constant dryness in the eyes, which the oil served to relieve, and this was the only particular symptom. The case was recorded in July, 1878, by Dr. Dodge, of Philadelphia. "What the oil from a rabbit may be," adds Dr. Burnett, "I do not know. This is a wonderful case, and perhaps of no great weight. Let some one with cataract try it." Cataract is not uncommonly associated with eruptive skin affections which have been repressed, such as itching erythematous patches, psora, etc.; insomuch that setting the cutaneous activities to work may prove beneficial in arresting this trouble. Both salt and sugar, when taken in excess, are thought to cause cataract; for which affection, in Russia, the gall of the sturgeon, also that of the partridge, as well as its blood, are used to the eyes.

It was a White Rabbit with pink eyes, which, after taking a watch out of its waistcoat pocket, and looking at it, hurried on, popping down a large rabbit hole under a hedge, and made Alice (*in Wonderland*), who was burning with curiosity, follow down after it, never once considering how in the world she was to get out again. And thus was brought about the series of Alice's delightful adventures, told with such exquisite humour, and illustrated with such admirable power (by the pencil of Tenniel.) "Oh, my ears and whiskers! how late it is getting!" said the rabbit." In South Australia rabbits are preserved on a large scale for shipment to Europe. At the Company's factory the rabbits are caught at night, disembowelled on the spot, and carried straightway to the works; here one after another in rapid succession their heads (subsequently boiled down for jelly), and legs are removed, and the skins pulled off in a twinkling; the bodies are slightly salted, and then washed free from blood; tins are already prepared, each of the thirty men employed at this work turning out three or four hundred a day. These tins,

into which the chopped up rabbits have been placed, are tied within a crate, and then lowered into a tank where, being first hermetically sealed, they are boiled for eight hours by steam. At the end of such time the tins are removed, the small hole at the top of each being re-opened, so as to let the steam, which has accumulated during the process of cooking, pass off. Before any air can enter, the hole is again soldered up, and the tins are then left to cool. Rabbits are never eaten in the southern parts of Chili, or on the islands of the Western coast, the Spaniards and Indians having as great a prejudice against their flesh as the Jews to pork. The negroes in the west Indies likewise reject rabbits, while they will eat almost any other kind of animal food; but the inhabitants of many islands in the Greek Archipelago live almost entirely on rabbit's flesh.

Sydney Smith, writing from Foston to Lady Grey, in November, 1821, asked her, "Pray, send me an account of yourself (recently convalescent) whether you have got out of sago, and tapioca, into rabbit, and boiled chicken. God send you may be speedily advanced to a mutton-chop." Again, concerning his friend, Francis Jeffreys, (then being promoted to a judgeship), "his robes, God knows, will cost him but little, (he was a small man); one buck rabbit will clothe him to the heels." Hood, in his whimsical way, has related an experience which he gained when abroad respecting this little rodent animal, and on which he has founded a lesson of manners :—

"But, pray remember this: that the French are so polite,
No matter what you eat, and drink, 'whatever is, is right!'
So when you're told at dinner-time that some delicious stew
Is *cat* instead of rabbit, you must answer, '*Tant mi-eux.*"

RADISH. (*See* ROOTS).

RASPBERRY. (*See* FRUITS).

SEVERAL varieties of the *Rubus idæus* produce raspberries, a fruit much used for making jellies, jams, and a sweet vinegar, likewise for flavouring summer drinks, and fever potions. The Raspberry contains crystallizable fruit sugar, a fragrant volatile oil, pectin, citric, and malic acids, mineral salts, colouring matter, and water. Raspberry vinegar is an acid syrup made with the fruit-juice, sugar, and white wine vinegar. When added to water

it forms an excellent cooling drink. Raspberry tea, infused from the leaves, and taken cold, will stay relaxation of the bowels. Like the Strawberry, this fruit when eaten does not undergo any acetous fermentation in the stomach even of gouty subjects. The vinegar is prepared by pouring white wine vinegar repeatedly over successive quantities of the fresh, ripe berries, used immediately after being gathered, else their fine flavour, which is quickly evanescent, becomes lost. Or, the vinegar can be extemporised by diluting Raspberry jelly with hot vinegar, this making a capital preventive of scurvy at sea. Gerarde teaches that the fruit should be give to them that have "weake, and queasie stomacks." Raspberry vinegar with water makes a useful gargle for relaxed sore throat. In Russian cookery is prepared *Smetanik*, or Raspberry pudding. Put a pound of fresh, or bottled Raspberries, into a small pie dish, and let them stand in the oven till they are quite hot, when they must be taken out. Whip up a teacupful of good, thick, sour cream with two eggs, one tablespoonful of flour, and one spoonful of white moist sugar. When these are all well beaten together, pour the mixture over the Raspberries, and bake the pudding in a very slow oven until it is firm. It should be of a light brown colour. Sugar improves the flavour of Raspberries.

In Germany a conserve of this fruit, which has astringent effects, is prepared with two parts of sugar to one part of the fresh juice expressed from the berries. An excellent home-made wine may be brewed from the fermented juice of ripe, sound Raspberries, which is admirable against scurvy because of the potash salts, the citrates, and malates. "A diet of other wayside berries, probably accounted for the cure of those scrofulous patients who, a few generations back, travelled hundreds of miles to receive the King's touch. As many as sixty applicants sometimes crowded the antechamber of our Charles II, and might as well have waited to get in touch with an old tom cat; but in many cases the abatement of the afflictions could not be doubted, especially when the patients had come long distances; which circumstance seems to have at last opened the eyes of such health seekers, who now prefer to treat themselves to a strawberry picnic, or even a hedgerow ramble, as in schoolboy days."

RHUBARB, GARDEN. (*See* HERBS).

RICE.

THE *Oryza sativa* produces as a native cereal of India our familiar grain, Ryze, or Rice, which is composed almost entirely of starch, being poor in proteid (nitrogen), and phosphoric acid. It is therefore of value as a demulcent to palliate irritative diarrhœa, and to allay intestinal distress. Chemically Rice consists of its abundant starch, with fat, fibrin, some phosphate of lime, cellulose, and water.

Paddy is rice from which the husk has not been removed before crushing.

Rice has been long held to exercise pectoral virtues, serving to check consumptive tendencies, and specially to prevent, as well as to arrest, spitting of blood from the lungs. The dry flour of this grain, if dusted on a bleeding wound, or sore, will effectually stop the flux. A mucilage of rice, made by boiling the well-washed grain for some time in a moderate quantity of water, and then straining, will contain starch, and phosphate of lime in solution. Rice-gruel made spicy with Cinnamon, and given, not hot, but at about 95° Fahr$^{t.}$, is most useful in irritative bowel complaints. When Lord Clive was shut up in Arcot, and the fare was most scanty, the Sepoys told him they needed less food than the Europeans, and asked would he order that the English should have the rice grains, and the Sepoys would be content to have the water in which the grains were first cooked; by getting this they had the best of the bargain. But when required as food, the grain should be steamed, because in boiling it loses the little nitrogen which is possessed, and the greater part of the lime phosphate.

As an article of sustenance, Rice is not well suited for persons with whom fermentation in the stomach is habitual when provoked by starchy foods. Neither can it be properly substituted in place of succulent green vegetables, together with fish, or meat, for any length of time, else it will induce scurvy. Probably it is not a function of the stomach itself to aid in the digestion of such starch, or of sugar, and fat; but when reaching the intestines Rice is absorbed by them very completely, leaving but a small amount of residue; its solid constituents are passed from thence into the blood almost as thoroughly as the juices of meat. Two factors determine the digestibility of vegetable foods in the intestines, the first being their bulk, and the second the amount

of cellulose which they contain. If the bulk be small, and the amount of cellulose scanty, as with white bread, rice, and macaroni, then the intestinal digestion is very complete. On the contrary, if the food is bulky, and full of cellulose, then intestinal digestion, and absorption, are much less thorough. The cellulose is not only almost useless for purposes of nutrition, but it largely prevents the access of the digestive juices to the nourishing ingredients which it encloses. "The reign of vegetables," said *Punch*, July, 1901, "is at hand, but we need a crusade to bring it in. Let noble verse be set to noble music for that end. Let us begin by glorifying Rice! That Rice is superior to flesh meat is easily proved. Who would throw mutton chops at a newly-married couple? No, we all thus acknowledge that innocent Rice is superior to mutton chops.

"How nice
Is Rice!
How gentle, and how very free from vice
Are those whose fodder is mainly Rice!
Rice! Rice!
Succulent Rice!
Really it doesn't want thinking of twice:
The gambler would quickly abandon his dice,
The criminal classes be quiet as mice,
If carefully fed upon nothing but Rice.
Yes; Rice! Rice!
Beautiful Rice!
All the wrong in the world would be right in a trice
If everyone fed upon nothing but Rice."

There are persons to whom Rice, in whatever form, or in however small a quantity, seems to be almost poisonous; cases are on frequent record where this grain, taken carefully cooked, has nevertheless produced extreme distress; even, in one instance, when some soup (as it was afterwards discovered) had been thickened with ground rice; and in another when bottled beer drunk at lunch was the cause of offence, the event showing that a few grains of rice had been put beforehand into the bottle for exciting a second process of fermentation in the beer. "Foods made with rice" (quoth Dr. Tobias Venner, 1620), "all are somewhat of hard concoction, and of an astringent facultie; to the aged, and such as are molested with phlegme, and obstructions, they are very hurtfull." Boutins, 1779, in an account of the diseases common in the East Indies, has stated that where rice is eaten almost exclusively the vision becomes

impaired. When it is boiled, Rice swells up, and absorbs nearly five times its weight of water, most of the mineral constituents being dissolved away. Two and a half ounces of Rice, cooked by boiling, (that is, about two-thirds of a soup plateful), require three and a half hours for their digestion. For the daily needs of an active, robust man, about five pounds of cooked rice would have to be consumed; therefore, when this grain is eaten in moderation it should be combined with proteid food, such as milk, eggs, light meats, or the better sorts of fish. Rice grains, as commercially supplied, consist almost exclusively of starch, and can therefore only augment the animal heat, and increase fatness, without ministering at all to the muscular sustenance, and the strength of body. But the inner husk of the grain, which lies immediately beneath the outermost horny capsule, contains albuminoids and phosphates in useful abundance; so that a brown bread made with four-fifths of rice flour, and one-fifth rice meal, is quite nutritious, and recruiting to the body in general, as well as to the nervous energies, the coarse outermost husk being first got rid of.

When making a rice pudding, the rice should be first boiled rapidly in water, four ounces of rice to a quart of water, adding salt, if desired, when the rice begins to soften. The milk should not be put with the rice for cooking until twenty or thirty minutes before the pudding is served, else, if cooked longer than this, the cheesy parts of the milk will be hard to digest. An old Dutch recipe for preparing a Rice pudding runs thus: "Take five teaspoonfuls of pounded rice, one quart of new milk, six eggs, eight ounces of sugar, two ounces of butter, and one teaspoonful of powdered cinnamon. Boil the rice and milk together until thick and soft; let it cool; then stir in the butter, whisk the eggs, white and yolk separately, and mix with the rice and milk. Bake for three quarters of an hour in a buttered mould, dusted with fine biscuit powder. Turn out when cold." Again, "Boil one cupful of rice in one quart and a half of new milk; stir in as soon as soft one tablespoonful of butter. When cold, whisk up three eggs, adding some cinnamon, or Tangerine orange peel. Stir well together, and bake for twenty minutes in a buttered pie dish." Eggs are chemically adapted admirably to supplement foods exclusively rich in starch, but poor in fat, such as rice, and similar cereals; thus when used in rice puddings they make these a complete food. If taken raw

mixed with skim milk, or with water, in fevers and other acute exhausting illnesses, eggs are quickly absorbed, and serve as highly nutritious aliment. But if it should unfortunately happen that their absorption becomes delayed within the body, then noxious and poisonous gases are generated by their putrescence. Usually the intestinal absorption of eggs is very complete, and they leave little, or no residue.

Saké, the national beverage of Japan, is a kind of strong beer, (containing about ten per cent of alcohol,) which is brewed from rice, by a peculiar method, quite different from the processes used in Europe. This mode of brewing is known to have been carried out there on a large scale for three hundred years. Singular success has attended the surgical treatment of the Japanese soldiers during their recent war with Russia. Surgeon-Major Seaman tells that up to the beginning of July over a thousand sick, and wounded had been received at two of the hospitals, and of those treated not a man died at either hospital. "To my mind," he adds, "the ration issued to the Japanese soldier has much to do with his immunity from suppurative conditions following serious injury. The freedom of the constitution of the Japanese soldier from inflammatory conditions is largely the result of his diet,—that of rice, fish, and a simple vegetable. The soldier's ration of rice is six 'go,' or about thirty-six ounces daily." Nevertheless, a formidable disease (Beri-Beri) has been at times the scourge of Japanese sailors when fed exclusively on rice. This malady is a form of scurvy, attended with dropsy, and overwhelming prostration of strength. Its origin has been traced to a microscopic spore infesting the rice. Beri-Beri has been everywhere about Java rife among vegetarians (which term among the maritime peoples of the Eastern tropics means feeders on rice). The only effectual curative treatment has been of a preventive kind by feeding those persons exposed to attacks with fresh meat, green vegetables, and fruit. "Beri-Beri," a duplicate Cingalese name, signifies "extreme, deadly debility." Tynesiders at Newcastle, as regards the young women of that locality, have a favourite habit of eating raw rice freely (also uncooked oatmeal, and starch,) for producing a pale complexion, which is considered among the north country folk to be particularly beautiful; but this pallor is actually due to a depraved digestion. For Rice water, as a useful drink in diarrhœa, or dysentery: "Wash

well an ounce of Carolina Rice with cold water, next macerate it for three hours in a quart of water kept at a tepid heat; and afterwards boil slowly for an hour, then strain. It may be flavoured with cloves, or other spice, and lemon peel. A very favourite dish with Cape children is "Yellow Rice," according to a Malay recipe. Take one pint of rice, two quarts of water, two tablespoonfuls of butter, a quarter of a pound of light yellow sugar, two teaspoonfuls of powdered turmeric, and some sultana raisins, or currants. Wash the rice well, and set it on the fire with the water, and all the ingredients at once; then let it boil for half an hour. Carolina rice is generally considered by far the best for puddings, but Patna rice, from Asia, is preferable in curries. The former, however, seldom leaves the United States now-a-days, therefore selected Patna is substituted. Ardent spirit fermented from Rice is known as arrack.

ROE OF FISH *(See* CAVIARE).

IN common with the Sturgeon's Roe, as Caviare, already considered, other fish Roes comprise thirty per cent of proteids, and nineteen per cent of fats, also about four per cent of mineral matters. These proteids include a good deal of nuclein, which is a fertile source of uric acid, and therefore improper for gouty persons. The milt is the organ in male fish which corresponds to the Roe in females. Cod's Roe, fresh from the fishmonger, should be put for cooking into boiling water, first pricking the outside skin with a needle; then boil it for an hour, or more, and let it become cold; cut it in slices, and fry with a little butter, not in fat, or lard. Small pieces of bacon may be eaten with this cooked Roe, which is a suitable dish for the consumptive, or diabetic patient. With respect to herrings, the fish technically known as "Matties" are immature, before the milt, and the roe, have become developed. They are considered a great delicacy in Russia, and Germany. Botargo is a relish made of the roes of certain fishes, strongly salted after they have become putrid; it is much used on the Mediterranean coast, as an incentive to thirst. The best botargo comes from Tunis, being dry, and reddish in colour; this is eaten with olive oil, and lemon juice. Pepys tells in his *Diary* how "we staid talking, and singing, and drinking great draughts of claret, and eating botargo, and bread and butter, till twelve at night, it being moonshine." The roe

of the grey mullet is costly, having a faint honey-like scent, because of the beeswax used in preserving it.

ROOTS.

LIKE the grain of cereals, roots are to be regarded as storehouses of nutriment for the support of the young plant when produced in its first growth. The reserve nutriment thus laid up in the roots, and tubers, is chiefly starch, so that it must be remembered that they supply only one of the needful elements for human and animal sustenance, and development. But roots are by no means altogether destitute of mineral ingredients, chiefly as salts of potash. The water, sparingly used, in which roots are cooked, and which therefore gets to contain much of the soluble salts, should be utilized, or the roots should be cooked by steam. Already the Beet, the Carrot, the Onion, the Parsnip, the Horse Radish, and the Potato, have been told of in these pages; besides which the common Radish, and the Turnip, remain to be considered.

The common Garden Radish (*Raphanus sativus*) is a cultivated variety of the horse radish; it was not grown in England before 1548, though highly commended by Dioscorides and Pliny in ancient days. John Evelyn (*Acetaria*) gave it as his opinion "that this root is hard of digestion, inimicous to the stomach, causing nauseous eructations, and sometimes vomiting, though otherwise diuretic, and thought to repel the vapours of wine when the wits were at their genial club." "The Radish," says Gerarde, "provoketh urine, and dissolveth cluttered sand. Its edible root consists of a watery, fibrous pulp, which is comparatively bland, and of an external skin furnished with a pungent, volatile, aromatic oil, which acts as a condiment to the phlegmatic pulp. Radishes are to be eaten with salt alone, as carrying their pepper in them." The oil contained in the root, (and likewise in the seeds), is sulphuretted, and apt to disagree with persons of weak digestion. A young Radish which has been quickly grown, and is tender, will suit most stomachs, especially if some of the tender green leaves are masticated together with the root; but a Radish which is tough, strong, and hollow, "*fait priser à l'ile d'Elbe; il revient.*"

"The juice of the roots," wrote Culpeper, "made into a syrup doth purge by the urine exceedingly. I know not what planets

they are under. I think none of the seven will own them." But for persons of sufficiently vigorous digestion radishes are preventive of boils, or skin eruptions, because of the pungent, volatile, sulphuretted oil which the outer rind contains. The pulp is chemically composed chiefly of nitrogenous substance, being fibrous, and tough, unless when the roots are young, and grown quickly; therefore they are commonly apt to obstruct the intestines. But mature, (not old) Radishes, of rapid growth, if boiled, or stewed, together with some of the succulent leaves, in their own moisture, or with a very little water put with them, are capitally antiscorbutic, and purifying to the blood, because of their sulphur. They will require long stewing so as to become tender. A syrup made with the juice expressed from radish-pulp, and sugar, is excellent for hoarseness, bronchial difficulty of breathing, whooping cough, and other pulmonary complaints. The black Radish is of special service against whooping cough, probably by reason of its volatile, sulphuretted oil. It is employed in Germany for this purpose by cutting off the top, and then making a hole within the root, which hole is filled with treacle, or honey, and allowed to stand thus for two or three days; afterwards a teaspoonful of the medicated liquid is to be given two or three times in the day, with a dessertspoonful of water, when required.

For the cure of corns, if, after the feet have been bathed, and the corns cut, a drop or two of fresh Radish juice be squeezed over the said corns, on several consecutive days, these troublesome pests will wither, and disappear.

"See the *corn-curing* hero comes!"

Also Radish roots sliced when fresh, and applied straightway to a carbuncle, will promote its cure. Roman physicians advised that Radishes should be eaten raw, with bread and salt, in the morning before taking any other food. And our poet Thomson has described as an evening repast:—

"A Roman meal
Such as the mistress of the world once found
Delicious, when her patriots of high note,
Perhaps by moonlight, at their humble doors,
Under an ancient Oak's domestic shade,
Enjoy'd spare feast, *a Radish, and an Egg.*"

Probably the name Radish is from *radix*, a root, or because of the reddish colour. Shakespeare makes Falstaff speak jestingly

of Justice Shallow, " When a' was naked, he was for all the world like a forked radish, with a head fantastically carved upon it with a knife."

The Turnip (*Brassica rapa*), belonging really to the cabbage order of plants, has become by cultivation from its wild state a most valuable food for cattle in the winter, and an excellent vegetable for our domestic uses. It exercises some aperient action, and the water wherein turnips are boiled will increase the flow of urine. The rind is acrid, but the green tops, especially of the Swede, when young, and tender, make a wholesome vegetable dish, being a succulent source of potash, and other mineral salts, in the spring-time. When properly cooked, turnips serve to sweeten the blood; but the rind particularly, and the pulp in a less degree, contain an essential volatile oil which is apt to disagree by provoking flatulent distension. The turnip root is sometimes cut up, and partly substituted for the peel and pulp of oranges in marmalade; but it is a remarkable fact that there is no starch in the composition of the turnip; seeing, therefore, that starch and sugar are absent in the root, there seems to be but little reason why turnips should not be allowed to diabetic patients. The white turnip eaten at table, though finer in flavour, is of less nutritive value than the coarser Swede. It contains scarcely any proteid elements, and " pectose " bodies make up the bulk of its carbohydrates, instead of starch. If turnips are properly grown, in dry, lean, sandy earth, a wholesome agreeable bread can be contrived from them, " of which we have eaten at the greatest persons' tables, and which is hardly to be distinguished from the best of wheat." Let the turnips be first peeled, and boiled in water till soft and tender, then strongly pressing out the juice, mix these together (after being beaten, or pounded finely) with their weight of wheat meal. Season it as you do other bread, and knead it up; then letting the dough remain a little to ferment, fashion the paste into loaves, and bake them like ordinary bread.

A nice wholesome Piedmontese dish of turnips is prepared thus: " Half boil your turnip, and cut it in slices like half-crowns; butter a pie dish, and put in the slices; moisten them with a little milk, and weak broth; sprinkle over lightly with bread crumbs, adding pepper and salt; then bake in the oven until the turnips become of a light golden colour." Horace advised field-grown turnips as preferable at a banquet to those of garden

culture. Comprising these with various other vegetable productions of the kitchen garden under the name *Caulis*, he has pronounced :—

> " Caulis suburbano qui siccis crevit in agris
> Dulcior : irriguis nihil est elutius hortis."
>
> " Plants from dry fields those of the town excel,
> Nothing more tasteless is than watered soil."

Turnips may be safely eaten when raw, having been at one time in favourite use thus in Russia by the upper classes. A boiled leg of mutton with turnips was the almost daily, and much loved dish for dinner of George III. In his quaint essay on *Grace before Meat*, Elia has said, " A man may feel thankful, heartily thankful, over a dish of plain mutton with turnips, and give himself leisure to reflect upon the ordinance, and institution of eating these ; when he shall confess a pertubation of mind inconsistent with the purposes of saying his grace before meat, on sitting down to venison, or turtle." Dr. Johnson's famous illustration of false logic bears a familiar reference to these roots :

> " If a man fresh Turnips cries,
> But cries not when his father dies,
> Is this a proof the man would rather
> Possess fresh Turnips than a father ? "

The Swede is of medicinal benefit for a chronic cough ; it should be cut in slices like a loaf of bread, and each slice sprinkled with brown sugar, then placing these slices again in their order, so as to reform the Swede, and allowing it to stand thus in a dish for some hours. The juice which runs therefrom is an excellent remedy for an old cough. Or again, " For a hoarsenesse, take a turnip, scoop out a hole from the top, and fill it up with brown sugar candy, and so roast it in the embers, and eat it with butter " (*Rare and select Secrets in Physick and Chirurgery*, 1653). The Swede, as well as the Turnip, when mashed, makes an excellent cleansing and stimulating poultice for indolent sores. In Southern America turnips are never sent to table in winter without a suspicion of added sugar to restore the flavour of which the frost has deprived them. Carlyle, writing from Chelsea (1842) to E. Fitzgerald, who had been excavating the supposed actual site of the battle of Naseby, north-west of his village, Woodbridge, said, "I will ask for a tooth, or a bullet, authenticated by your own eyes, and your word of honour. And our Scotch

friend, too, making manure of it! he is part of the picture. I understand that almost all the Netherland battlefields have already given up their bones to British husbandry. Why not the old English next? Honour to thrift! If of five thousand wasted men you can make a few usable turnips, why, do it!"

ROSES.

CERTAIN curative properties, which may be rendered in culinary forms, are possessed by both the wild Dog Rose of our country hedges, and by the cultivated varieties of this queen of flowers in our Rose gardens. The fruit of the wild Rose, which is the common progenitor of all the Roses, bears the name "Hips." Gerarde has told that "Heps maketh most pleasant meats, or banquetting dishes, as tarts, and such like, the concoction whereof I commit to the cunning cook, and teeth to eat them in the rich man's mouth." The woolly down which is formed inside the hips serves usefully as a medicine for expelling round worms from the intestines, on the lining membrane of which it acts mechanically without irritating this mucous coat. A sauce Eglantine (from the Briar Rose) was frequently served at Balmoral in Queen Victoria's time. This was made from the hips which grow so abundantly on the wild rose trees (in the autumn) by the roadsides on the Balmoral estate, the hairy seeds having been first removed from within these hips, and a sweet purée being then made of the red berries in pulp, with a little lemon juice, or other acid, added. The hairs which line each Rose hip inside around the achene, will, if swallowed, being insoluble, cause an itching of the fundament. Petals of red Roses are found to contain a volatile oil, colouring matter, tannin, gallic acid, fatty elements, albumen, soluble potash salts, insoluble calcareous salts, silica, and oxide of iron. At Mitcham Rose-petals are dried in a stove, because slow spontaneous desiccation by mere exposure to the sun and air impairs both their astringency, and their colour; the petals of the unexpanded flowers are chosen for drying. The poet Pope has told about the rude savage who

> "Restrained by none but nature's lenient laws,
> Quaffs the clear stream, and feeds on hips, and haws."

Rose-leaf jam was a favourite preserve with Queen Natalie, of Servia. Two sorts of this confection are provided, one from

Turkey (the land of Rose attar), and a superior kind from France : for this latter the petals of pink roses are placed in a small glass pot, which is then filled with pure sugar syrup ; the petals merely curl up, but do not become crushed.

When fully ripe and softened by frost, the hips, after removal of their hard seeds, and when plenty of sugar is added, make an excellent confection, which has special curative virtues, and which apothecaries employ in preparing electuaries ; also as a basis for several sorts of pills. From Roses the Romans formerly concocted wine, and confections, also subtle scents, a sweet-smelling oil, and certain medicines. The petals of the crimson French Rose, which is grown freely in our gardens, have been esteemed of signal efficacy as remedial for consumption of the lungs, since the time of Avicenna (A.D. 1020), who states that he cured many patients by prescribing as much of the conserve thereof as they could manage to swallow daily ; it was combined with milk, or with some other light nutriment, and generally from thirty to forty pounds of this pleasant medicament had to be consumed before the cure was complete. "Take," says an old M S. recipe of Lady Somerset's, "Red Rose buds, and chyp of the tops, and put them in a mortar with ye waight of double refined sugar, beat them very small together, then put it up ; it must rest three full months, stirring onces a day. This is good likewise against ye falling sickness."

The conserve of Red Roses is also helpful for irritability of the bladder with scalding urine, if eaten freely as a jam on bread, or with warm milk. Our grandmothers were given to place fragrant Rose petals over cherry pies before laying on the upper crust. The *British Pharmacopœia* of to-day orders a confection to be made of hips, the ripe fruit of the Dog Rose (*Rosa canina*) ; and another conserve of Red Rose petals (*Gallica*) whilst still unexpanded, these petals being beaten to a pulp in a stone mortar, and then rubbed well together with refined sugar. A small teaspoonful of the conserve is a dose. The petals of the Cabbage Rose (*Centifolia*), which are closely folded over each other like the leaves of a cabbage, have a gentle laxative action, and are used for making Rose-water by distillation, either when freshly gathered, or after being preserved by admixture with common salt. This fragrant water has long enjoyed a reputation for the cure of inflamed eyes (sometimes with sulphate of zinc, or sugar of lead, added in quite small quantities). Attar of

Roses is a costly product, because consisting of the comparatively few oil globules found floating on the surface of a considerable volume of Rose-water thrice distilled. It takes five hundred-weight of fresh Rose petals to produce one drachm by weight of the finest Attar, this being preserved in tiny bottles made of rock crystal. The scent of the most minute particle of the genuine essence is very powerful, and enduring.

"*Quo semel est imbuta recens servabit odorem, testa diu,*" said Horace; which Moore has delightfully rendered thus:—

> "You may break, you may shatter the vase if you will,
> But the scent of the Roses will hang round it still."

Tennyson has most suggestively propounded the query:—

> "Oh, to what uses shall we put
> The bind-weed flower that simply blows?
> And is there any moral shut
> Within the bosom of the Rose?"

"Rose-water" (so called) was at one time the only approved flavour for pound cake; and this "water" was really good old brandy (often of home distillation), or peach, or cherry brandy, in which the petals of Damask Roses had been macerated. To make a conserve of Red Roses, according to the *Compleat Housewife*: "Take Rosebuds, and pick them, and cut off the white part from the red, and choose the red flowers, and sift them through a sieve to take out the seeds; then weigh them, and to every pound of flowers take two pounds and a half of loaf sugar; beat the flowers pretty fine in a stone mortar, then by degrees put the sugar to them, and beat it very well till it is incorporated together, then put it into gallipots, and tie it over with paper, and over that with leather; it will keep for seven years." Again, in *Adam's Luxury, and Eve's Cookery* (London, 1744): "To make conserve of Red Roses, as designed for the use of all who would live cheap, and preserve their health to old age: Take one pound of Red Rosebuds, and bruise them with a wooden pestle in a marble mortar, adding by degrees of white loaf sugar, powdered, and sifted, three pounds; continue beating them till no particles of the Roses can be seen, and till the mass is all alike." Concerning *Rosa gallica* (the Red French Rose), its full-blown flowers are as laxative as those of the Cabbage Rose (*Centifolia*). Poterius relates that "he found a drachm of powdered Red Roses occasion three, or four stools;

and this not in a few instances, but constantly during an extensive practice for several years." The Cabbage Rose contains a sweet extractive matter which is the laxative principle; and a crystalline volatile oil may be obtained therefrom, which is the English Attar of Roses. To smell at a fragrant Rose will often soothe a nervous headache; or to have the scalp gently rubbed, and kneaded with finger-tips first dipped in genuine Rose-water; also by spraying essence of Roses over the scalp with an atomizer. Red Rose leaves, if over-dried (for *Pot pourri*, and other uses), become resinous, and then acquire an unpleasant smell. The French perfumers manage to dry the Rose petals so that they will remain sweet, and good even in damp weather; whereas English dried petals "go back" when encountering any damp. Probably the resin which becomes formed in the dried petals makes them somewhat laxative when employed in the confection, and likewise antiseptic. Resin is common in vegetables, existing in combination with some volatile oil. Some resins seem to be oxidized essential oils; if combined with a food any such resin is beneficial because acting as a tonic to the mucous lining of the intestines, thus preventing the exudation therefrom of serum, and mucus. The rosined wine of Italy (*see* "Alcohol") is antiseptic, and as being resinous promotes intestinal digestion without relaxing the bowels. On tasting the Vino Vermuth at a Tuscan farm, or rustic Inn, the British pedestrian is apt to exclaim that the landlord has drawn the wine in a varnish pot. But without doubt the wholesomeness of many Greek, and Italian native drinks is due to their preservation from decay, and from secondary fermentation, by the rosin, in place of fiery, and fuselly spirit.

Rare Secrets in Physick and Chirurgery (1653) orders as "a gentle purge" to "take one ounce of Damask Roses, eat it all at one time; fast for three-quarters of an hour after, then take a draught of broth, and dine." A syrup of Red Roses is dispensed by our chemists, which is slightly astringent, and esteemed for its rich colour "As the Roose in hys Redness is Richest of Fleures,"—is a quaint old maxim. "And the Rose itself," sang Keats,—

> "has got
> Perfume which on earth is not."

But that "there is no Rose without a thorn" is an adage as old as the hills.

"Ave, Rosa, spinis puncta,
Ave spina Rosæ juncta,
Spinas poenæ non peccati
Portas Jesu, volens pati.
HYMN (*Fifteenth Century*).

Our main business here with Roses is how to use them for remedial purposes, such as recovery from sickness, and the maintenance of life. But in times long past the wealthy Greeks, and Romans, strewed these fragrant flowers on the tombs of departed friends, whilst poorer persons could only afford a small supplicatory tablet at the grave, bearing the pious prayer :—

"Sparge, precor, Rosas super mea busta, Viator!"

Nowadays most persons have an aversion to throwing a Rose into a newly-made grave, or even letting one fall in. However, Matthew Arnold was more sensible than this, and pathetically exclaimed respecting the funeral rites of a girl untimely dead :—

"Strew on her Roses, Roses,
And never a spray of Yew!
In quiet she reposes:
Ah! would that I did too!"

"The Rose," said a Roman, in times long ago, "was a harbinger of spring"—

"Cum Rosam viderat tum incipere ver arbitrabatur."

American physicians, notably Dr. Winternitz, find that a combination of the essence of Red Roses with birch-buds (powdered) is admirably remedial against dysentery; this has commanded quite a big price per pot through acquiring such a curative fame. Likewise Birch tea, made from the dried leaves, is remarkably helpful in relieving dropsy from obstructed kidneys; the leaves should be gathered, and dried in the early summer. Birch wine, concocted (*Compleat Housewife*, 1736) with the sap of the tree, adding honey, cloves, and lemon-peel, is fully discussed in *Kitchen Physic*. Another excellent method for making this is: After cutting an incision through the bark of a Birch tree, insert a small stone therein to act as a seton. Then suspend a bottle, or jar, so as to catch the juice which escapes from the wound. When enough has been collected, this is to be boiled for an hour, with a quarter of its volume of honey, adding a few cloves, some cinnamon, mace, and lemon-peel. The liquid is then to be fermented with yeast on toast

in a tub covered lightly for three days, afterwards strained, and poured into bottles, which are to be kept uncorked until manifest fermentation has ceased; each bottle must be full before it is corked. The infusion of Birch leaves is a reliable solvent of stone in the kidneys, even where other treatment by mineral waters, and drugs, has failed, so that a surgical operation seemed imperative. After taking the Birch tea for some while the stone has in each case begun to be dissolved, and has been passed by fragments in the urine. A teaspoonful of the powdered leaves is brewed in half a pint of boiling water for half an hour, this quantity being taken twice a day for six months continuously. Both the buds, and the young Twigs yield a volatile empyreumatic oil which is colourless, and volatile, having a pungent balsamic odour, the oil possessing a persistent fragrance of Russia leather; the bark affords "betulin." The fresh leaves are used to form a bed on which rheumatic patients lie, and which excites profuse perspiration. The oil is curative for skin eruptions, and for itch. "*Disputandi pruritus fit ecclesiæ scabies.*"

ROSEMARY. (*See* HERBS).

IT has been already stated that an infusion of the dried Rosemary plant, (leaves, and flowers), being used when cold, makes one of the best hair-washes known; its volatile oil specially stimulates the hair-bulbs to renewed activity. Physiologists (particularly M. Metchnikoff, of the Pasteur Institute,) now tell us why the hair becomes white as old age supervenes. Its pigment colour lies scattered, during early and middle life, between the two layers of each hair; whilst the hostile cells, or phagocytes, are all the time in subjection, because of the physical strength, and endurance then personally possessed. But in old age these hostile cells, which occupy the hairs' central cylinder, gain the ascendency, and proceed to devour all the pigment within their reach, afterwards ejecting it from the body, and leaving the hair grey, or white. In like manner, as the years approach senility the higher nerve cells of the brain, which subserve intellectuality, sensation, memory, and control of movements, tend to disappear, and are replaced by elements of a lower kind, the superior nervous cells being devoured by these "macrophags." But the higher cells of the spinal marrow are much less subject

to such ravages of senile decay than those of the brain. Nevertheless, in old age generally the dominant cells of the various vital organs suffer gradual inanition, whilst the activity of the consuming phagocytes, or white corpuscles, is enormously increased; they batten, for lack of other food, upon the nobler organs of the human frame. But here steps in the modern physiologist with a new theory, and a saving promise for the future. "In a few years," boasts he, "at the Pasteur Institute, or elsewhere, we shall find out a sustaining serum (or soup,) which will keep these phagocytes still supplied with their necessary nourishment, and will thus prolong the vitality of heart, and brain, and lungs in the human individual. It will then come about that from twenty to twenty-five years a man shall live for himself, and his family; from fifty to a hundred for science, and humanity; and after a hundred for the State. Honoured, useful, in full possession of all his faculties at six score years and ten, the grey-beard of the approaching future will be among the most enviable of mankind. We ought to reach one hundred and forty years of age. A man who expires at seventy, or eighty, is actually cut off prematurely in the flower of his days."

RUE. (*See* HERBS).

THE herb Rue was termed of old "serving men's joy," because of its curing so many common ailments. Its juice is of great efficacy in some forms of epilepsy, operating for the most part insensibly, though sometimes purging. Concerning its use for this distressing infirmity, Julius Cæsar Baricellus said, "I gave to my own children two scruples of the juice of Rue, and a small matter of gold, and by the blessing of God, they were freed from their fits."

RUM (*See* CORDIALS, *Punch.*)

RYE (*See* BREAD).

NEXT to Wheat, which is the great bread-making grain of the world, comes Rye, but it contains less gluten than wheat, and of a chemically different kind, so that the bread made therefrom is moist, and heavy; moreover, fine Rye flour possesses much less proteid than wheat flour. Rye meal, which is the basis

of the dark, sour breads of Northern Europe, and Holland, is of nearly the same chemical composition as barley meal. Rye grain is subject to a fungus producing "ergot," and which makes it poisonous.

SAFFRON.

THE dried stigmata of our cultivated *Crocus sativus* furnish what is known as Saffron, this being put by the cook to various culinary uses. It should consist of the loose stigmata (uncaked), being thus known as true "hay Saffron." From olden times this has been esteemed as highly cordial, and salutary, with anti-spasmodic, and some sedative effects. A narcotic oil may be extracted from the stigmata. Most of the commercial Saffron is had from Greece, and Asia Minor. In England it was fashionable during the seventh century to make use for laundry purposes of starch stained yellow with Saffron.

"Give us bacon, rinds of wallnuts,
Shells of cockels, and of small nuts,
Ribonds, bells, and Saffroned linnen."
1654.

And in an old cookery book of that period it is directed that "Saffron should be put into all Lenten sauces, soups, and other such dishes; also that without Saffron we cannot have well-cooked peas." Lord Bacon taught that "Saffron conveys medicine to the heart, cures its palpitation, removes melancholy, and uneasiness, revives the brain, renders the mind cheerful, and generates boldness." The name Crocus is taken from the Greek *krokee*, a thread, in allusion to the thin, elongated stigmata of the flower. Old Fuller has quaintly expounded his notion that "the Crocodile's tears are never true save when he is forced where Saffron groweth; whence he hath his name *Croco-deilos*, or the Saffron fearer, knowing himself to be all poison, and it all antidote." The colouring matter of Saffron is a substance called polychroite, or crocin, and the mildly stimulating properties of the stigmata depend upon a volatile oil. "Saffron is a special remedy for those that have consumption of the lungs, and are, as we term it, at death's door, and almost past breathing, so that it bringeth breath again, and prolongeth life for certain days, if ten, or twenty grains at most, be given in new, or sweet wine. It presently, and in a moment

removeth away difficulty of breathing, which most dangerously, and suddenly happeneth."

Saffron tea will effectually control fluxes of blood, especially with women, if given of moderate strength, half a teacupful, sweetened to taste, every three, or four hours. The same remedy is likewise of service for faulty vision when there is a sense of gauze before the eyes, which the patient tries to wink or wipe away. "*Nec poteris Croci dotes numerare, nec usus.*" It was customary in the sixteenth century to cultivate the growth of Saffron on a considerable scale, with varying success according to the season. Farmers who failed to produce a good crop became querulous, and wore dismal faces, being at the same time known agriculturally as "crokers"; and hence arose the exhortation under misfortune "not to be a croaker;" though others refer this figure of speech to the croaking of a frog.

Throughout Cornwall loaves, and cakes are commonly dyed yellow with Saffron. In Essex the plant was formerly cultivated largely, and particularly at Saffron Walden, where some of it was repeatedly presented in a silver cup by the corporation to several of our sovereigns, who visited Walden for the ceremony. The stigmata of the Saffron will give an intoxicating quality to beer; they exercise a specific influence on the brain, and nerves, insomuch that when taken in large doses the Saffron will cause immoderate mirth, and involuntary laughter. It has the singular property of counteracting the intoxication produced by alcoholic liquors, as do hops likewise to some extent; this was known to Pliny. Smelling strongly at the Hay Saffron of commerce (as obtained from France, and Spain) will cause headache, stupor, and heavy sleep, whilst during its internal use the urine becomes of a deep yellow, or orange colour. Irish women frequently dye their sheets with Saffron, so as to protect them from vermin, also with a view to strengthen their own limbs

SAGE *(See* HERBS).

SAGO.

GROWING naturally in Japan, and the East Indian Islands, whilst also cultivated in English hot-houses, is the Sagus Palm, which yields by its gummy pith our very serviceable Sago.

Both it, and the Tapioca, as culinary esculents confer animal warmth by their abundant starch, over 86 per cent being comprised in the former grain; likewise Arrowroot consists chiefly of starch (about 82 per cent). These several foods supply in an agreeable form starch (not eatable by itself) which becomes completely absorbed within the intestines, so that on this account they are specially valuable. If required as a complete nutriment in health, they must be accompanied by such proteids as exist in light animal food, together with some fat.

"There was an old man of Iago,
Whose food was restricted to Sago:
Oh! how he did jump
When the Doctor said plump,
'To a roast leg of mutton you may go.'"

"Tamdudum senior quidam de rure Tobagus
Invito madidas carpserat ore dapes:
Sed medicus tandem—non injucunda locutus—
'Assæ, dixit, oves sunt tibi cæna, senex.'"

Sago is of particular service as helping to nourish infirm old persons, and children. The Indians reserve their finest Sago for such cases, and for invalids. Its fecula, washed from the plentiful pith, is very demulcent, and more digestible than the starch of rice. Such fecula never ferments in the stomach, and is very suitable for patients liable to waste because of a feverish state of body. Portland Sago, an English variety, is a farina extracted from the corm, or tuber, of our hedgerow *Arum maculatum* ("lords, and ladies"), or Wake-robin, a familiar wayside plant. This fecula was formerly prepared largely therefrom in the Island of Portland. To make a light restorative soup which never disagrees, or ferments in the stomach: "Boil half an ounce of small Sago in a pint of home-made beef-tea, (or of water in which a dessertspoonful of Liebig's meat extract is dissolved), until it is clear, then add half a pint of milk, with a little seasoning; boil up, and pour it over the beaten-up yolk of an egg in a bowl; stir, and serve." The late Queen Victoria was particularly fond of Sago pudding, with which she took powdered cinnamon as a condiment. Similarly the late Lord Tennyson had a penchant for rice pudding.

For a Sago soufflé: "Take one pint of new milk, two and a half ounces of butter, an ounce and a half of sugar, two ounces of pearl Sago, an ounce and a half of blanched almonds (chopped very fine); mix all these together, and put over the fire, cooking

the mixture for fifteen minutes, whilst constantly stirring; then remove from the fire, and let it cool. Beat three eggs, and pour in a little thereof at a time until all is used thus; and perhaps some almond flavouring may be discreetly added. Put the mixture into a pudding dish, and bake for half an hour. Sift a little powdered sugar over it, and serve immediately in the dish in which it has been baked." Tapioca is another food of like character, being pure starch, as prepared from the root of the Cassava, or Manioc plant, which grows in tropical America, Asia, and Africa. It is more easy of digestion than any other kind of farinaceous nourishment, and less liable to produce acidity. When the root is freshly cut a milky juice exudes which is highly poisonous; but after this is withdrawn the remainder of the root yields Tapioca starch, which is in no way whatever deleterious. Its agglomerate masses distinguish it from the regular shaped grains of Sago. Our chief supplies of Tapioca are imported from Brazil. Whether boiled in water, or milk, or steeped in boiling water, and then baked, it makes, when sweetened, and flavoured to taste, a very palatable, and light food, which is to be highly commended for invalids, and children: (*see* also page 564.)

SALADS.

It is an essential requirement for the body's health that chemical changes shall take place in the blood as to its salts of potash, and soda, for setting free the carbonic acid gas with which these earths are combined. In order to effect such chemical changes Salads, or their equivalents, are needed, otherwise the said gas becomes difficult of excretion, and proves more or less poisonous. John Evelyn, in his quaint *Acetaria*, or *Book of Sallets* (1706), puts the matter thus: "We see how necessary it is that in the composure of a Sallet every plant should come in to bear its part without being overpowered by some herb of a stronger taste, but should fall into their place like the notes in music." Therefore it was the comical Magister Cook introduced by Damoxemus, when asked (*Atticé*) "What harmony is there in meats?" answered, "That very same that a diatesseron, and diapason, have to one another in a consort of music." Again, "Raw Sallets, and herbs have experimentally been found to be the most sovereign diet in that epidemical with us, and almost

universal contagion, the *scorbute*, to which we of this nation, and most other Islanders are obnoxious; yet since the *Nasturtia* (Cresses) are simply, and alone, as it were, the most effectual, and powerful agents in conquering, and expunging that cruel enemy, it were proper to show what remedies there are contained in our magazine of Sallet plants, upon all occasions rightly marshal'd, and skilfully applied." The lesser garden vegetables, put together uncooked in a bowl so as to be temptingly and toothsomely combined, form *Salads*, which are both salubrious, and appetizing. The Lettuce usually takes the lead therein, Cresses being added, Beetroot, Endive, Spring Onions, Radishes, and sometimes a few fresh, young Dandelion leaves. As such vegetables, when eaten raw, are apt to ferment in the stomach, and as they have very little stimulating power on that organ, some condimentary dressing is usually intermixed with them, as pepper, salt, mustard, etc.; vinegar also is added, not only for its grateful sharpness, but, further, because of its solvent action on the fibrous parts of stalk, leaf, and root, which are otherwise somewhat indigestible. Lucca Oil is considered by most persons a necessary complement, though it tends to prevent access within the stomach of digestive juices to the inner substance of the vegetables, and therefore makes the salad disagree with weakly folk. "Salad Oyl," as Evelyn teaches, "should not be high-coloured, or yellow, but of a pallid olive-green." "Pepper (*Piper*) being of approved virtue against all flatulency, and generally all crudities whatsoever, is a never to be omitted ingredient of our sallets, provided it be not too minutely beaten (as oft we find it) to an almost impalpable dust; which is very pernicious, and frequently adheres, and sticks in the folds of the stomach, where, instead of promoting concoction it often causes a *Cardialgium*, and fires the blood; it should therefore be grossly contused only." A French proverb pertinently says:—

"Qui vin ne boit après Salade
Est en danger d'être malade."

Respecting vinegar, it must be noted that this, as practically a mineral acid, is of fixed composition, and does not undergo disintegration when taken with foods, like the organic acids of fruits, and vegetables; in nearly all of which the potash is combined therewith, and is given off into the blood during digestion. "Sometimes, because of the fruits being acid (though readily

disintegrated by the stomach,) I have found it advantageous to throw half a teaspoonful of bicarbonate of potash into a tumblerful of water containing the fresh juice of a lemon, and have even added it to stewed, or baked rhubarb, and to stewed gooseberries; in these latter it froths like whipped cream, and lessens the demand for sugar, any excess of which is harmful to goutily-disposed persons. But I must conclude my sermon on the potash text by adding that it is quite possible to take too much of this alkaline solvent, especially as a drug from the chemist, which is in any excess depressing to the vital powers" (Thudicum). The Salad Oil must be thoroughly good, quite clear, and transparent, whilst entirely free from any rancid smell, and the paler this oil is the better. Such white deposit as is sometimes seen in Salad Oil is vegetable albumin, which ought to have been refined out, as it prevents the oil from keeping sweet. Lucca Oil, which has a peculiar "nutty" flavour, is the best.

One of our historians tells us that in Old English days the life of our ancestors was coloured with a broad rosy English health; but this statement is open to question, since a large consumption of flesh meat, barely qualified by a scant supply of fruit, and vegetables, can scarcely have conduced them to a pure state of their bodily system. As a matter of fact, inflammatory diseases, and skin diseases were rife at those times; there were yet lepers in the land; and, rightly or wrongly, the public generally believed in heroic treatment for warding off sickness; so the barber-surgeon flourished then, and bleeding, blistering, and cupping were among the common experiences of everyday life. Before the introduction of the Potato, and the extended cultivation, and use, of other garden vegetables which are now common, the need of anti-scorbutics was very widely felt. Herb drinks were religiously taken in the spring to purify the system after the salt meat of the long winter months.

Those several vegetables which have just been particularized as commonly used in making a Salad, do not need to be taken again into detailed consideration, each being already described in its alphabetical place. Endive (*Cichorium*), and the Dandelion (*Taraxacum*) are subsidiary for persons disposed to sluggish action of the liver, each being a helpful solvent of bile. The former, a Succory, of two varieties (plain, and curled), is chiefly cultivated for Salad uses in the winter, and spring, "when, as being whited (bleached), they are the more tender, and

delicate, "very pleasing to the stomach, refreshing the weake, and fainting spirits;" so Gerarde has said. The dwarf white Batavian sort is the more delicate in flavour. The fleshy leaf-ribs of Endive (*Cichorium endivia*) contain ¼ per cent of sugar. Endive is of several sorts,—the white, the green, and the curled. It is distinguished from Chicory by its less bitter taste, and by its annual root. For a purée of Endive: "Wash, and remove the outer leaves from one cut Endive; have ready a saucepan only just full enough of fast-boiling salted water; throw the vegetable in, and allow it to cook quickly until tender; then drain it thoroughly, and mince it very finely. Melt one ounce of butter in a stewpan, put in the Endive, and heat it without browning it; dredge a small quantity of flour over it, and stir in one teaspoonful of thick, raw cream; season with a quarter of a teaspoonful of salt, a pinch of castor sugar, and a suspicion of grated nutmeg; then colour to a delicate green with juice of spinach, or of parsley. Let the purée simmer gently at the side of the range for about a quarter of an hour. Immediately before dishing it up work in a few tiny lumps of fresh butter; pour out into a hot dish, and serve garnished with triangles of toast, and sprays of fresh parsley."

The Dandelion plant contains chemically "taraxacin," inulin (a sort of sugar), gluten, gum, and an odorous resin which specially stimulates the liver. Probably this reputed virtue was at first, in times long past, assigned to the herb mainly according to the doctrine of signatures, because of its bright yellow flowers of a bilious hue. But more modern, and more scientific experience quite vindicates the medicinal claims of this plant (leaf, and root) for remedying an indolent function of the bile-making, and bile-distributing organs, with a disposition to jaundice. The root abounds with a milky juice which is thick, sweet, and albuminous during the winter, but bitter and acrid in summer time; it is at its best for yielding juice in November. A decoction may be usefully made by slicing the root, and boiling one part thereof for fifteen minutes in twenty parts of water, straining this when cool, and sweetening with brown sugar, or honey, if desired. A small teacupful may be taken once, or twice a day. The leaves should be blanched by being covered in the earth as they grow, and are best for a Salad in spring time. The Dandelion root may be serviceably roasted, and ground, so as to be mixed with coffee, making a

capital dietetic combination. It has some tendency to provoke urination at night, by reason of which one of its vulgar appellations has been conferred,—"*Quasi herba lectiminga, et urinaria.*"

Constitutional struma (as it is called), scorbutic tendencies, and scrofula are innate morbid proclivities, more or less identical, and varying in degree; they render their subjects especially liable to tubercular disease, though it is not the case that all the ailments of scrofulous persons are indicative of, or dependent on tubercular deposits. It is against strumous, and scrofulous developments, that many of the fresh herbs employed in Salads are specially beneficial, this being remarkably the case with respect to the various Cresses. The kindred maladies of such a nature to which the Watercress, and its allied plants are antidotal, get the name of scrofula, from the Latin word "*scrofa,*" a burrowing pig, as signifying the destructive mischief done radically to important vital glands within the body by this ruinous undermining hereditary disease. Perhaps the quaint lines which nurses have been long accustomed to repeat whilst fondling the fingers, one by one, of their amused babes, bear a sly meaning which imports this bugbear of a scrofulous taint. The said familiar distich runs thus as each finger, when handled in its turn, is personated as a fabulous little pig: "The first small piggy doesn't feel well; the second one hastens the doctor to tell; the third little pig has to hunger at home; and the fourth little pig can of dinner eat none; then the fifth little pig, with a querulous note, cries, 'Weak! weak! weak!' from its poor little throat."

"Ægrotat multis doloribus porculus ille:
Ille rogat fratri medicum proferre salutem:
Debilis ille domi mansit vetitus abire:
Carnem digessit nunquam miser porculus ille:
'Eheu,' ter repetens, 'Eheu,' perporculus, 'Eheu,'
Vires exiguas luget plorante susurro."

About Norfolk the digits are called popularly "Tom Thumbkin," "Willy Wink-in," "Long Gracious," "Betty Bodkin," and "Little Tit."

In Cogan's *Haven of Health* (1589) it was told that "Lettuce is much used in Sallets in the summer tyme, with vinegar, oyle, and sugar, and salt, and is formed to procure appetite for meats, and to temper the heate of the stomach, and liver." For a simple "*Salade à la Francaise*": "Separate the Lettuce, leaf

from leaf, and wash them very thoroughly; shake them in a Salad basket, and dry them lightly on a soft serviette; then tear the leaves into pieces of a proper size; rub the inside of the Salad bowl with a split clove of garlic; put the Salad presently into the bowl, dusting it with a little salt, and a little white pepper; next add oil, and vinegar (one tablespoonful of the oil to two of the vinegar; mix lightly, and thoroughly *with the hands* (not with fork, spoon, or knife), and let the Salad be served at once for immediate use." As a preliminary to the above, after picking away all the decayed, or damaged leaves, the Lettuce parts, when well washed, should stand for about fifteen minutes in salted water, and then be left for a few hours in fresh water, changed at intervals. Likewise for "*Salade d'Orange*": "Proceed in the same way, but rub the inside of the Salad bowl with a split onion, squeezing out the juice as thoroughly as practicable; add the Salad, and accompaniments as above; then add a quarter of a clove of garlic (finely minced), a large orange freed completely from skin, pith, and pips, and torn into small pieces; mix assiduously, and finally add from three to six drops of tabasco, (a sauce made spicy with Jamaica Pepper and Clove-Cassia,) mix again, serve, and your guests will rise up, and call you blessed." Gerarde has said about the Lettuce: "Being in some degree laxative, and aperient, the Lettuce is proper for hot, bilious dispositions." And Parkinson adds: "Lettuce eaten raw, or boyled, helpeth to loosen the belly; and the boyled more than the raw."

The Germans wax enthusiastic over the charms of *Kertoffelen Salade*, also over their famous Beetroot Salad, "*Rotte Ruben Salade*." For the Spanish Salad (*Gaspacho*), this is made with bread, and vegetables, the bread-crumbs being soaked in water, or broth, and squeezed rather dry in a cloth; then salt is added, also olive oil, some red, or green pimentoes, some tomatoes, and vinegar. In Spain this Salad is eaten with a spoon made out of an excavated crust of bread, if a permanent spoon is not at hand. It should be noted that the vinegar here is a mistake, because it would hinder digestion of the starches in the bread; fresh lemon-juice should be substituted. Sir Thomas Browne, in *Religio Medici*, declared: "I could digest a Salad gathered in a churchyard as well as in a garden. I wonder not at the French with their dishes of frogs, snails, and toadstools; nor at the Jews for locusts, and grasshoppers; but being amongst

them make them my common viands, and I find they agree with my stomach as well as theirs; at the sight of a toad, or viper I find in me no desire to take up a stone to destroy them." Charles Lamb, by contrast, gave the preference to more solid, and substantial meals. "My appetites," said he, "are too high for the Salads which (according to Evelyn) Eve dressed for the Angel: my gusts too excited to sit a guest with a Daniel at his pulse."

The Cowslip, and the Primrose, by reason of the delicate flavours which their petals afford, whilst the colours are attractive, find frequent admission now-a-days into Salads at refined tables. Furthermore, the curative virtues which these flowers respectively supply may be thus brought to bear in a pleasant, palatable way. Already we have given some consideration to the Cowslip. Both it, and the Primrose contain a fragrant volatile oil, together with "mannite," and a somewhat acrid principle, "saponin." Alfred Austin, Poet Laureate, counsels to "make healing salve with Primroses." "Primrose tea," says Gerarde, "drunk in May is famous for curing the phrensie." Count Nesselrode, the venerable Russian diplomatist, who "never grew old," when asked what was the secret cause of his prolonged youth, replied, "Flowers, and muisc," both of which he cultivated with enthusiasm. Primrose blossoms are quieting to the nerves, and will allay spasm, besides tending to the promotion of sleep. They go well with the Lettuce in a Salad for supper. Whilst the petals are fresh they possess a honey-like odour, and a sweetish taste; when collected and dried, they become of a greenish colour. In Devonshire an odd superstition is attached to these flowers: if only a few are brought by anyone into the house for the first time in the early spring, the good wife will say, "Whot a vüle yu be tü bring in tü, or dree Primrosen! Now us shant av no chickun vur a brave while, and they that be a-hatched 'll die ov tha gaps." But if a large bunch of Primroses had been gathered, and brought in, the results with regard to chicken hatching, and rearing, would have been quite satisfactory; so goes the rural belief.

> "Pale Primroses
> That die unmarried ere they can behold
> Bright Phœbus in his strength."
>
> *Winter's Tale.*

A "*Salade des Violettes*" is a delicious dish, fit for the table of Apicius, or Lucullus: "Take Batavian endive, finely-curled

celery, a sprinkling of minced parsley, a single olive, and the petals of a couple of dozen blue Violets ; these several ingredients are to be mixed with the purest olive oil, salt, and pepper, being the only other condiments ; add a dash of Bordeaux wine, and a suspicion of white vinegar." Lately, because of a marvellous cure (as reported) of desperate cancer by the outward application of Violet leaves made into infusion, this herb has acquired a resuscitated renown. The case was that of Lady Margaret Marsham, sister to the present Earl of Romney. Her throat had become completely closed by an obstructive malignant growth, and all food had to be administered by artificial means below. Under the continued use of Violet stupes day, and night, the growth gradually subsided, and ultimately disappeared. Far back in 1586 " the whole work of that famous Chirurgeon, Master John Vigo, gave directions ' how to cure cancer.' The prescription (for purgation of the matter antecedent) included confection of Violets, as likewise does the prescription which is ' to take away the matter conjunct.' " This is a much older herbal than that of Culpeper. For making a syrup of sweet Violets : " To one pound of sweet Violet flowers, freshly picked, add two and a half pints of boiling water ; infuse these for twenty-four hours in a closed china vessel ; then pour off the liquor, and strain it gently through muslin ; afterwards add double its weight of the finest loaf sugar, and make it into a syrup, but without letting it boil.

Reference has been made previously to a " Rosebud Salad." as invented at Chicago. And again, a " Nasturtium Salad " is palatable, elegant, and anti-scorbutic. " Shred a lettuce finely, and mix with it some freshly-gathered, young, succulent Nasturtium leaves, together with two hard-boiled eggs cut into quarters ; place them in a Salad bowl, and dot with Nasturtium flowers ; serve with fresh lemon-juice, or with whatever other dressing is preferred." Lord Beaconsfield said that Primroses make a delicious Salad ; and because of this the flower has become associated for ever with his name. A century ago many other materials were introduced into Salads, which are not thought of now for the purpose, such as Fennel, Marsh-Mallow tops, Hops, Wild Marjoram, Elder Flowers, Asparagus, and Nettle. Tennyson makes Lynette ask her scullion :—

> " What knowest thou of flowers, except belike
> To garnish meat with ? "

Evelyn has admonished: "Let your herby ingredients be exquisitely cull'd, and cleans'd of all worm-eaten, slimy, cankered, dry, spotted, or anyways vitiated leaves." He enumerates thirty-five different Salad herbs. "Guava Salad," or "Angels' food," is a favourite Cape dish. "Take one and a half dozen guavas, two oranges, sufficient sugar, and a wine-glassful of good sherry; peel, and slice the guavas thinly, lay them on a glass dish, and sprinkle over them a little sugar, then a layer of orange, sprinkled with sugar; again guavas, and again orange, continuing thus till the glass is filled; pour over all the glass of sherry, and let it stand for a while. This makes a delicious dish for dessert. The guava resembles a small apple with many seeds, and is famous for the well-known guava jelly; it is imported from the West Indies, and is occasionally grown in British conservatories. The fruit is somewhat astringent, being sweet, aromatic, and sometimes acid.

For a plain, wholesome Salad-dressing: "Mix the yolk of a hard-boiled egg (dry) with one teaspoonful of newly-made mustard from the pot, one teaspoonful of brown sugar, and half a teaspoonful of salt; when these are thoroughly blended, add one tablespoonful of vinegar, and then three of milk. Be careful to mix the vinegar thoroughly before adding the milk, or else it may turn to curd. Cream may be added, but the dressing is sufficiently good without it."

"Oh, cool in the summer is salad,
And warm in the winter is love:
And a Poet shall sing you a ballad
Delicious thereon, and thereof:
Take Endive: like love it is bitter;
Take Beet, for, like love, it is red;
Crisp leaf of the Lettuce shall glitter,
With Cress from the rivulet's bed;
Anchovies, foam-born, like the lady
Whose beauty has maddened this bard,
And Olives from groves that are shady,
And Eggs (just a hint! 'Boil 'em hard')."

Evelyn, in his *Acetaria*, has insisted on no less than nine essential requirements for the proper making of a Sallet, and some of these are sufficiently quaint. For instance, "That the knife (according to the super-curious) with which the Sallet-herbs are cut (especially oranges, limons, etc.) be of silver, and by no means of steel, which all acids are apt to corrode, and retain a metallick relish of." Again, "That the Saladiere (Sallet

dish) be of porcelane, or of the Holland Delf-ware, neither too deep, nor shallow, according to the quantity of the Sallet ingredients." "And note, that there ought to be one such a dish in which to beat, and mingle the liquid vehicles; and a second to receive the crude herbs in, upon which they are to be pour'd, and then with a fork, and a spoon kept continually stirr'd till all the furniture be equally moistened. Some, who are husbands of their oil, pour at first the oil alone, as more apt to communicate, and diffuse its slipperiness than when it is mingled, and beaten with the acids, which they pour on last of all; and 'tis incredible how small a quantity of oil (in this quality like the gilding of wyre) is sufficient to imbue a very plentiful assembly of Sallet-herbs." "Care must be taken by the collector of such edule plants that as near as he can they should consist of the *Oluscula*, and *ex foliis pubescentibus*, or (as Martial calls them) *Prototomi rudes*, and very tenderest parts—germs, young buds, and even first rudiments of their several plants; such as we sometimes find in the craws of the Wood-culver, Stock-dove, Partridge, Pheasants, and other Upland fowl, where we have a natural Sallet, pick'd, and almost dress'd to our hands." "But now after all let none imagine that whilst we justify our present subject through all the topicks of panegyric, we would, in favour of the Sallet, dress'd with all its pomp, and advantage, turn mankind to grass again; which were ungratefully to neglect the bounty of Heaven, as well as his health, and comfort."

SALT.

Not only is Salt a condiment at table for giving a zest, and relish to foods, but it is essential in moderate allowance for such, neutralizing the abundant potash salts which are contained in foods, particularly of the vegetable sort.

> "Ley Salt on the trenchere, with knyfe that be clene,
> Not too myche, be thou were, for that maks yo lean."

It has been noticed that tribes, and races which subsist chiefly on vegetable diet, have more need of Salt than meat-eating communities; so that vegetarians, in common with herbivorous animals, are great consumers of Salt. The cereals, and leguminous plants which abound in potassium salts, would otherwise

cause their copious excretion of soda in the urine (which Salt, taken with food, replaces) to be mischievous; but rice is an exception, as it contains but few potash salts. There is abundant evidence that a liberal use of Salt as a condiment tends to prevent the formation of gravel in the urine. Contrariwise, by some writers, notably Dr. Braithwaite, of Leeds, an excess of common Salt in the diet is believed to induce cancerous deposits. Oliver Wendell Holmes, the American writer, has humorously declared: "I can never stay among the village people of our windy Capes, without now and then coming upon a human being who looks as if he had been split, and salted, and dried, like the salt-fish which has built up his arid organization." In the folk-lore which is to be found among all European peoples, as to the unhallowed feastings, and merry-makings of witches, and demons, it is always noticeable that at such gatherings there was no Salt. And hence has arisen a notion that Salt is a safeguard, and a protection against sorcery, and witchcraft of all kinds; from which belief has been derived the old, and widespread notion that to spill Salt is most unlucky. Leonardo da Vinci, in his famous painting of the "Last Supper." has most significantly indicated the evil intention, and the unhappy fate of Judas, by representing him in the act of upsetting the Salt-cellar, and thus spilling the sacred Salt.

Just lately in this country a new habit of Salt-eating largely has sprung up, and prevails especially amongst women; it even reaches a stage in which the person carries lumps of Salt about, and is continually nibbling thereat; the disastrous effects of which pernicious practice are a peculiar yellowness, and shrivelling of the skin, followed presently by the loss of all the hair, even that of the eyelids; then cancerous disease frequently supervenes. Competent physiologists declare that table Salt has a very considerable power of retarding peptic (digestive) action in the stomach; even in the proportion of one part to a thousand during a meal it has an appreciable effect of this nature, and with one part in two hundred the effect is so great as to almost bring the digestive process to a standstill. "Why," asks Sir W. Roberts, "do we use so much Salt with our food? Animals in a state of nature require none: they find (with most rare exceptions) all the Salt they need in their natural food; but our cooks are always adding Salt in their culinary preparations, and we take it constantly on our plates

at meals. This habit is probably dependent on the elaborate preparation, and cooking to which the food is subjected. In the manipulation of wheat for flour the grain is deprived of its outer coating, or bran, which contains the larger part of the saline matters of the wheat. Potatoes, and green vegetables, are boiled in an excessive quantity of water, and thereby the saline ingredients are washed out. Meat, and fish are boiled, or roasted, and in these ways lose some of their mineral constituents. Salt must therefore be supplied artificially to make up the defect, and to restore to the food so treated, that sapidity, and salinity of which it has been in part deprived." Which cogent reason probably originated the old German proverb, "*Saltz und brot machen backen roth*"—"Salt, and bread make the cheeks red." But the addition of some moderate Salt to the water when boiling meat is quite desirable, having a three-fold action: First, it immediately causes a coagulation of the outside surface of the meat, so that the inner juices are sealed up, and retained; secondly, it slightly raises the boiling point of the water; and, thirdly, by increasing the density of the water the exosmosis, or oozing out, of the sapid juices from within the meat is less active.

"The finny treasures of the deep,
The flocks which climb the mountain steep,
All food spread over plains, and lea,
Without some Salt would tasteless be."

Whilst the lean of meats is rendered less digestible by salting, the reverse is true of the fat; hence it happens that the fat of broiled, or cold, boiled bacon is notably easy of digestion.

Various special uses of table Salt as a curative medicine have been explained previously in *Kitchen Physic*, as antiseptic, and chemically alterative against gout, whilst specifically curative in minute doses for a sneezing catarrh, preventive of chronic constipation, also of migraine, dispelling melancholy, and exterminating thread-worms. These several topics need not be reconsidered here. The noted old Lord Chesterfield, in his letters to his son, then at Basle (November, 1766), wrote: "I had been dangerously ill of a fever in Holland during 1732, and when I was recovered of it, the febrific humour fell into my legs, and swelled them to that degree, and chiefly in the evening, that it was as painful to me as it was shocking to others. I came to England with them in this condition, and consulted Mead,

Broxholme, and Arbuthnot, who neither of them did me the least good, but, on the contrary, increased the swelling by applying poultices, and emollients. In this condition I remained near six months, until, finding the doctors did me no good, I resolved to consult Palmer, the most eminent Surgeon of St. Thomas's Hospital. He immediately told me that the physicians had pursued a very wrong method, as the swelling of my legs proceeded only from a relaxation, and weakness of the cutaneous vessels, and he must apply strengtheners instead of emollients; accordingly he ordered me to put my legs up to the knees every morning in brine from the salters as hot as I could bear it; the brine must have had meat salted in it. I did so, and after having thus pickled my legs for about three weeks the complaint absolutely ceased, and I have never had the least swelling in them since." When treating kidney disease dietetically the amount of Salt in the food should be diminished as much as possible, because the burden of excreting it falls entirely on the kidneys. A free use of table Salt in the diet makes the urine alkaline, and increases the solubility of gouty acid-products therein; for such reason stone in the bladder is rare amongst sailors, who consume much Salt. That Salt was customary as a condiment in the eighteenth century we may infer from an allusion thereto in the *Art of Cookery* (1790):—

> "Perhaps no Salt is thrown about the dish?
> Or no Fry'd Parsley scattered on the Fish?
> Shall I in passion from my Dinner fly,
> And Hopes of Pardon to my Cook deny?"

The explanation of an almost universal desire for common Salt is to be found in the fact that this mineral is essential to all the fluids of the body,—the blood, the lymph, the chyle, tears, etc. It is a remarkable fact that when nutrient injections have to be given for support (food not being practicable by the mouth, on account of some serious disability) the addition of Salt thereto promotes their absorption; why this is so cannot be easily explained, but the effect is a matter of the first importance. For rheumatic swelling of the joints, and limbs, an application of the Salt-pack is to be highly commended. Some flannel soaked in a saturated solution of common Salt should be wrapped around the affected joints, and covered over with thin waterproof tissue (guttapercha, or oiled silk), upon which a bandage is bound, the whole appliance being kept on during all night, and

continued every night whilst necessary. A dry flannel should be substituted around the part by day.

Salt is not present in the body, or in plants, unless conjoined with phosphates. The Cerebos Salt now deservedly in vogue with grocers contains a small definite proportion of the mixed phosphates as found in wheaten bran; it is a remarkably fine and white Salt, whilst it does not cake on a damp, or foggy day. During the course of an attack of lung inflammation (pneumonia) it is a strange fact that the urine (which then becomes scanty, and high-coloured) ceases to contain chlorides, such as are commonly present in healthy urine. At the same time these chlorides are found to be retained in the matters excreted from the lungs. Whilst this derangement persists, table Salt (chloride of sodium) should be withheld from the food, whether liquid or solid, and fresh lemon-juice should be added to the weak broths, or other simple drinks. When the expectoration becomes free, during convalescence, the chlorides are again discoverable in the urine. For serving to cure a catarrhal cold in its continuous stages, common Salt, when triturated, has a remarkable efficacy. Though probably taken liberally at the same time as a condiment with food, it does not have in such form any similar results as when dried, and patiently rubbed up with dry powdered sugar of milk for half an hour together (one part of the Salt to nine parts of the milk sugar). The mixed powder should be then kept in a well-corked, wide-mouthed bottle; half a teaspoonful to be given on the tongue three times in the day. A dynamic virtue is thus acquired by the Salt resembling that contributed to crude quicksilver (comparatively inert as a medicine) when pounded up with conserve of roses into what is known as "blue pill," a potential drug even by giving only a few grains thereof. Provings of table Salt taken in excess by healthy persons have produced all the symptoms of chronic catarrh.

SANDWICH.

SUETONIUS, who lived in the times of the Cæsars, tells of the Sandwich as known among the Romans under the name "*Offula;*" though our English term is given after John Montagu, fourth Earl of Sandwich (1780), who used to have slices of bread with ham between them brought to him at the gaming-table, so that

he might go on playing without intermission. Byron wrote, alluding to the two Earls, *Spencer*, and *Sandwich* :—

"The one invented half a coat,
The other half a dinner."

As an acceptable, and nourishing little meal, when the teeth are defective, or the masticatory powers feeble, an excellent plate of Sandwiches may be made thus : "Prepare a little good gravy, or stock, and add to it enough gelatine to ensure firmness when cold ; there will not be any necessity to clarify the stock for this. Pour it on a dish, or soup plate, and when set, about an eighth of an inch thick, stamp out small rounds of it, and take a couple of these rounds for each Sandwich, adding a central layer of finely-minced, underdone beef-steak, or mutton-chop (keeping the gravy therein). Now form these into Sandwiches with brown, or white bread and butter, stamping each to the shape of the jellied stock. In all cases keep the stock cool, and prepare the Sandwiches immediately before serving." Other Sandwiches may be conveniently, and profitably made for similar uses, such as of egg (hardly boiled), chicken-cream, minced beef with olives, sardines, cream cheese, etc. ; and likewise sweet Sandwiches of plain jams, fruit compotes, and marmalade ; a happy combination is that of Gruyère cheese, and plantains. "'What are all them clerks eating Sandvidges for ?' asked Mr. Weller, senior, of his son, Sam, when they went together to the Will Office, at the Bank of England. 'Cos it's their dooty, I suppose,' replied Sam ; 'it's a part o' the system : they're allvays a-doin' it here, all day long'" (*Pickwick*).

Apricot Sandwiches are especially grateful to a weakly, qualmish stomach which can only bear light food ; they should be made with a purée of fresh, ripe fruit, sweetened, and flavoured with Noyau. In Devonshire Sandwiches are prepared with the clotted cream of the county spread on brown bread, having sugar, and grated biscuit-crumbs strewn on the top just before serving, so that their crispness may be fresh ; sometimes also a layer of sweetened raspberries underlies the cream. "Claret, Sandwich, and an appetite," as Byron gossips in *Don Juan*, "are things which make an English evening pass."

Some remarkable Sandwiches were lately recorded (by Dr. J. Johnston) as having been made with satisfactory effect of cotton-wool, for a patient who accidentally swallowed his false teeth

through being struck in the face by a wave whilst swimming in the open sea. He was treated with Sandwiches containing a thin layer of cotton-wool in each, between the slices of bread and butter; and after a week, when a mild laxative was given, the dental structure, being now enrolled in cotton-wool, was passed without difficulty amongst the excrement. In *Alice through the Looking Glass* "the White Knight had a little box, 'of his own invention,' to keep clothes, and Sandwiches in. 'You see,' he told Alice, 'I carry it upside down so that the rain can't get in.' 'But the things can get out,' Alice gently remarked; 'do you know the lid's open?'"

SAUCES.

PENN's advice to children was this, as regards appetizing condiments, and spices: "Let your chiefest Sauce be a good stomach, which temperance will help to get you." The question of Sauces in general certainly concerns epicures, and gourmets, rather than persons seeking to recover their health in times of sickness, and convalescence, when plain, unsophisticated nourishment is needed without artificial adjuncts. Nevertheless, certain simple Sauces are frequently of excellent supplementary use; as, for example, when white fish is eaten, which is chiefly nitrogenous food, and is rendered more complete as sustenance by combination with a bland Sauce of carbonaceous, warmth-giving materials.

"Our fathers most admired their sauces sweet,
And often ask'd for sugar with their meat:
They butter'd currants on crude veal bestow'd,
And Rumps of Beef with Virgin Honey strew'd."
Art of Cookery.

It is said that the noted Worcester Sauce was first skilfully compounded by a clever physician to disguise the flavour of asafœtida given for the benefit of a dyspeptic nobleman whose health was being treated thereby. Cassareep, from Demarara, the thickened root-juice of the *Cassava utilissima*, boiled down until of the consistence of molasses, is believed to be the basis of Worcester Sauce; this is of great digestive assistance, and has an extraordinary power of making tough meat tender, also of rendering fat pork edible without subsequent discomfort, by a curious change which it effects thereupon. Dr. Thudicum

explains the importance of a proper Sauce as a lubricating principle, demonstrating this by an experiment upon potatoes, cooked first with a Sauce, and then without it. "The Sauce served to smooth the morsel for passage along the digestive canal, and stimulated an increased flow of saliva, thus augmenting the juices for solution of the potato, whilst also improving the appetite." Several of the most familiar Sauces in common culinary use have definite objects in view, to be effected by their respective special qualities; such as Mint Sauce with lamb, Apple Sauce with goose, Bread Sauce with fowl, or game, Fennel Sauce with mackerel, Egg Sauce with salt fish, and various other Sauces. Mint "stirring up the appetite for meat," which makes this so general in our acid Sauces, said Pliny; whilst the vinegar dissolves the young albumin; apples being laxative with rich flesh of domesticated birds, or pork; bread furnishing bodily warmth, and fat with lean flesh of fowl; fennel "consuming the flegmatick quality of fish"; and eggs being the complement of innutritious salted Lenten fare; whilst horse-radish, again, is a digestive spicy antiseptic Sauce with fatty roast beef; and Soy corrects the possible ptomaines of salmon.

What is known as Mayonnaise Sauce (a corruption of Magnonaise), which is an emulsion of egg-yolk with olive oil, serves by its condimentary vinegar to aid in dissolving the albumin of cold viands, from which the natural digestive volatile spices have now evaporated. For half a pint of this Sauce, put one raw yolk of an egg into a basin, with a pinch of salt, and of white pepper; also a saltspoonful respectively of English, and of French mustard, with just a dust of Cayenne; mix this combination with some of the best salad oil, drop by drop, using a wooden spoon; when it is as thick as butter, add a teaspoonful of Taragon vinegar, and eight or ten drops of lemon-juice. Pepys has noted in his *Diary* on December 2nd, 1660: "Lord's-day: home to dinner; my wife, and I all alone to a leg of mutton, the Sauce of which being made sweet I was angry at it, and eat none, but only dined upon the marrow-bone that we had beside." What is called by trans-Atlantic locution "Apple Sass" is a jam-like compound of apples boiled down with sugar, and potted by thrifty American housewives, to be used for the open tarts which are so popular in New England. Dr. Doran tells about an eccentric dinner on record, which consisted entirely and exclusively of Sauces, but without conferring any adequate

benefits on the guests; indeed, quite the reverse. "The soup was represented by Gravy Sauce; whilst Oyster, and Lobster Sauce were handed round in lieu of fish; Egg Sauce did duty for a joint, on the ground probably that an egg is proverbially 'full of meat'; Bread Sauce suggested pheasant to the hungry guests; and Brandy Sauce stood in stead of plum pudding; wine was served after each Sauce-boat had been emptied."

Anchovies (for a Sauce) form a flavouring zest of high value; these small fish are taken on the Eastern Coasts of Italy, France, and Spain, by night, and are salted in barrels with brine, to be cooked in various ways; if made too dilute they lose their flavour, and become spoilt. They are deservedly called "the drunkard's delight," because of their powerfully saline taste, and stimulation of palate; moreover, they are noted of old as good against agues, and for loosening the belly.

Bread Sauce, delicious when properly made, and suggestive to the invalid of toothsome game, even when such meat cannot be allowed, is nevertheless a positively repulsive mess when wrongly treated,—a mixture which can only be described then as a spiced bread-poultice. The backbone, as it were, of good Bread Sauce is the proper flavouring of the milk used in making it. To effect this, "take a three-ounce onion, peel off the outer skin, and blanch it for five minutes in scalding water; then cut it into quarters, and put them with a dozen peppercorns, six cloves, a blade of mace, a pinch of grated nutmeg, and a salt-spoonful of salt into a saucepan containing not less than half a pint of good milk. Remove the pan from the fire as soon as the surface of the milk looks frothy; let it cool, and replace it, continuing the operation till the flavour is extracted, adding a little milk from time to time to make good the loss by evaporation. Then strain it through a piece of muslin into a clean saucepan, and stir into it (off the fire) sufficient finely-sifted stale crumbs of white bread (that have been dried in the oven) to bring the mixture to the consistency of an ordinary purée, but on no account any thicker. Finally finish off with a good tablespoonful of cream at the moment before serving. The yolk of one egg beaten up in a little warm milk until it looks creamy may be used as a substitute for the cream, though the latter is to be preferred."

The Sauces of classic times (Greek, and Roman) have been told about in *Kitchen Physic*, particularly their "garum," and

"alec," highly esteemed by the epicures of those days. Amphoræ of the former have been exhumed at Pompeii, the contents thereof being now voted "darksome, saltish, biting, and beastly"; though this condiment, prepared from the intestines of fish allowed to putrefy, and then spiced to a degree, was the popular Roman Sauce, as proverbially as melted butter is now that of the English. Sydney Smith writing (June, 1844) to M. Eugene Robin, said: "I am living among the best society in the Metropolis, and at ease in my circumstances; I dine with the rich in London, and physic the poor in the country;—passing from the Sauces of Dives to the sores of Lazarus." "*Fames optimum condimentum est*,"—"Hunger is the poor man's best Sauce." Some wiseacre has scoffed at us English as "a people with only one Sauce." The fact is we have as many Sauces as we have kinds of meat; each in the process of cooking yields its native sap, and this is the best of all sauces conceivable. Only English folk know what is meant by *gravy*; consequently the English alone are competent to speak on the question of Sauce. Gravy is a watery solution of meat extract, which is browned by the action of heat whilst nearly dry, the change from broth to gravy being analogous to that which sugar undergoes when it becomes caramel. Broth, however highly concentrated, has never the stirring effect of gravy (not too brown). Such broth still requires the addition of flavouring vegetables, and condiments. When the extractive matters of meat turn in cooking to reddish-brown gravy, the alkaloids, and peptonoids of the previously pale soup undergo a change, like that of starch, and sugar, when heated to a high degree of temperature; they lose water, become doubled, or trebled in chemical structure, and assume new properties, the brown products being caramels, and exercising powerful effects on the nervous system.

Charles Lamb, in Elia's *Table-talk*, has humorously said: "It is a desideratum in works that treat "*de re culinariâ*" that we have no rationale of Sauces, or theory of mixed flavours, so as to show why cabbage is reprehensible with roast beef, whilst laudable with brawn; why the haunch of mutton seeks the alliance of currant jelly, but the shoulder civilly declineth it; why loin of veal (a pretty problem!), being itself unctuous, seeketh the adventitious lubricity of melted butter; and why the same part in pork, not more oleaginous, abhorreth from it;

why the French bean sympathizes with the flesh of deer; why salt fish points to parsnip; why brawn makes a dead set at mustard; why cats prefer valerian to heartsease, old ladies *vice versâ* (though this is rather travelling out of the road of the dietetics, and may be thought a question more curious than relevant); why salmon, a strong sapor *per se*, fortifieth its condition with the mighty lobster Sauce, whose embraces are fatal to the delicate relish of the turbot; why oysters in death rise up against the contamination of brown sugar, while the sweet yam by turns court, and are accepted by the compliable mutton-hash, she not yet decidedly declaring for either! We are as yet but in the empirical stage of cookery: we want to be able to give a reason of the relish that is in us."

SAUSAGE.

A RECEIPT for stewing "Sauce-sedges" is given in the *True Gentlewoman's Delight* (1653), as used at the Bridge Fair, Peterborough, according to a Charter granted to the Abbot of that "Golden" city in the days of Henry the Sixth; it being then a time-honoured custom, which is still observed, to eat a luncheon of Sausages, and Champagne thereat. But far more ancient, it would appear, is the German Sausage:—

"The graceful madchens trip, and trip,
To sound of rippling flutes;
The old men deeply sip, and sip,
As grave as ancient mutes;
The Fraus all sigh contented,
As wine, and music flow,
For Sausage was invented
A thousand years ago."

The famous Hungarian Pork Sausage, or "Salami," as big as a man's arm, is very largely consumed throughout Austria; it is generally purveyed by a provision pedlar, who carries cheese, and Salami, together with an enormous pair of scales. The addition of flour which is often made in these, and other Sausages, causes them to become unwholesome if they are kept for any time, because a fermentation is developed of the moist flour, which is injurious. English black puddings, provided they be eaten freshly made, are useful vehicles for supplying animal "hæmoglobin" to bloodless patients whose digestive powers are not too much impaired for assimilating the contents thereof. Fat pork is boiled for about three-quarters of an hour, then chopped

small, and flavoured with salt, peppercorns, pimento, etc.; and, after mixture with boiled grits, or rice, and not too great a proportion of warm fresh pig's blood, it is placed in the skins, and boiled. The German Red Sausage (*Rothwurst*) much resembles our "black pudding." Their "*Gehirn*," or brain Sausage, consisting principally of calves' brains, and pork, may be profitably imitated when the wish is to administer animal brain substance remedially. The German red Sausages (to be eaten uncooked) may contain trichinæ, parasites of a baneful character, which no amount of drying, salting, or smoking at a low heat will destroy. Our English Sausages are prepared with raw meat, suitably flavoured with spices, and often including a small proportion of bread-crumbs. In poorer districts the amount of bread, or powdered biscuit, is increased, not infrequently in excess of the meat; indeed, cases have been known in which Sausage-rolls contained nothing but bread coloured with red ochre. Black puddings undergo decomposition with more readiness than ordinary Sausages. The French *Saucisses* contain smoked minced flesh, usually pork, with spices. The Bologna Sausage is an Italian speciality, large, and smoked, being made of bacon, and veal, with pork-suet. The drier a Sausage is the better are its keeping properties. In Paris a large number of the horses which are slaughtered are made into Sausages, the vendors of which are supposed to declare that horseflesh is present. Analytical chemists are able to detect such horseflesh by several assured methods. As sources of nutritious proteids, Sausages are certainly not more economical than ordinary meat. It has been remarked about them with some truth that they resemble life, because one never knows what is in them until having gone through them. The Saveloy (*Cervelat*) was originally made of brains, but is now prepared of young pork, salted. and with some nitre added. Dickens told about "Office lads in their first surtouts, who club as they go home at night for Saveloys, and porter." White puddings are a kind of Sausage made of oatmeal mixed with suet, and seasoned with pepper, salt, and sometimes onions, these ingredients being stuffed into a prepared intestine.

SEAWEEDS.

HALF-A-DOZEN, or more, of the common Seaweeds produced about our English coasts are edible, and at the same time curative

for various bodily ailments by reason of their potential marine properties; some of these Seaweeds are to be served by the cook for the table, whilst others benefit by external application. The former set includes Dulse, Laver, Samphire, and Sea Holly; and the latter class comprises *Fucus vesiculosus* (Bladderwrack), and *Laminaria digitata* (Sea-tang). It may be stated broadly that the Seaweeds which are of use as remedial simples owe their powers to the bromine, iodine, and sulphate of soda which they possess. Pliny, and Dioscorides in their days extolled the qualities of various Seaweeds; and modern doctors, particularly on our coasts, are unanimous in pronouncing Seaweed embrocations, and poultices, as of indisputable excellence for reducing glandular swellings, and in curing obstinate sprains; likewise they advocate the particular claims of Bladderwrack for internal use, as well as Eryngo, Irish Moss, and Samphire. Furthermore, sea-water itself, being rich in chlorides, and iodides, will serve both preventive, and curative medicinal purposes in a culinary form. Dr. Sena, of Valencia, has given bread made with sea-water for cases of scrofulous disease, and for certain states of similar defective nutrition, with singular success.

Dulse (*Tridea edulis*) is used in Scotland, and Ireland, both for food, and a medicine; as a marine weed it contains within its cellular structure much iodine, which makes it specially stimulating to the absorbent vessels for removing morbid deposits, and tumours. In Ireland the Dulse is first well washed in fresh water, and exposed to dry in the air, when it gives out a white, powdery substance which is sweet, and palatable, covering the whole plant. The weed is then packed in cases for preservation, to be eaten as it is, or boiled in milk, and mixed with flour, or rye. The powdery substance is "mannite." This Dulse is pinched with hot irons by the fishermen in the South-West of England so as to make it taste like an oyster; in Scotland it is roasted in the frying-pan. Dulse has bright-red, broadly wedge-shaped fronds which often bear frondlets on their margins: it is stored in casks to be eaten with fish. A fermented liquor is made from this seaweed in Kamschatka.

Laver is the popular name for certain edible Seaweeds, the *Porphyra laciniata*, and the *Ulva latissima*. They abound in marine salts, and are preventive of scurvy during a long sea voyage. The *Porphyra*, or Sloke, is slimy, or semi-gelatinous when served at table, being eaten with vinegar, or lemon-juice,

and pepper; some persons prefer it cooked with leeks, or with onions. It varies in size, and colour, between tide-marks, being sometimes long, and ribbon-like, of a violet, or purple hue; at other times long, and broad, whilst changed to a reddish purple, or yellow. Laver, besides its beneficial use as food, can exercise remarkable healing powers; it may be applied, when boiled in its own juices, over a cut, or open sore, and tied on for three, or four hours, when a thin skin will form over the wound; and after repeating this application two or three times, the cut generally heals up entirely, and only a very small scar is left. The cooking of Laver for table consists usually in an addition of butter, and Seville orange juice, heating the mixture over a spirit lamp, whilst stirring until ready for being served. It is eaten with roast meat, and seldom liked at first, but becoming agreeable by habit. Laver bread is a food made from green Laver. The *Ulva latissima*, a Seaweed of deep-green colour, called by fishermen Oyster-green (because used for covering over oysters), is less palatable, though an anti-scorbutic weed.

Samphire (*Crithmum maritimum*, "*Herbe de Saint Pierre*"), which grows in clefts of rocks close to the sea, is highly esteemed as a pickle when made from the young leaves. The genuine Samphire is a small plant bearing yellow flowers, in circular umbels, on the tops of the stalks, which flowers are followed by seeds like those of fennel, but larger; the leaves are juicy, with a warm aromatic flavour, and are excellent against scurvy. Persons living by the coast cook Samphire as a pot herb; formerly it was cried regularly in the London streets by the name of Crest Marine. Evelyn has praised its virtues against spleen. A spurious Samphire (*Inula crithmoides*) is often supplied instead of the real plant, having a different taste, and but few of the true virtues; this grows more plentifully on low rocks, and on ground washed by salt water. Gerarde says about Samphire: "It is the pleasantest sauce, most familiar, and best agreeing with man's body." "Preferable," adds Evelyn, "for cleansing the passages, and sharpening appetite, to most of our hotter herbs, and salad ingredients."

> "Green girdles, and crowns of the sea gods,
> Cool blossoms of water, and foam."

In the West of Ireland, by the sea coast, a dish seen very

frequently on cottage tables is "*Dillisk*," another Seaweed, (*Rhodymenia palmata*) chopped up small, and added to a stew of limpets, and milk, which is thickened with potatoes, or oatmeal. In olden times this, and Laver, were considered to be great delicacies; and in many ancient Irish houses a small silver saucepan may still be found within which the Laver used to be cooked, and served straightway at table, before becoming cooled, and then tasteless.

Eryngo roots (of the Sea Holly) were highly valued in Elizabethan days for renewing masculine vigour, such as Falstaff invoked. Being prepared with sugar, they were called "Kissing Comfits." Lord Bacon, when recommending the yolks of eggs as invigorating if taken with Malmsey, or sweet wine, teaches: "You shall doe well to put in some few slices of Eringium roots, and a little Ambergrice; for, by this means, besides the immediate facultie of nourishment, such drinke will strengthen the back." This plant grows in the sand on many parts of our coasts, with stiff, prickly leaves, and roots which run to a great length among the sand, being charged with a sweetish juice. A manufactory for making candied roots of the Sea Holly was established at Colchester by Robert Burton, an apothecary, in the seventeenth century, as they were esteemed anti-scorbutic, and good for improving the health. Gerarde tells: "The roots, if eaten, are good for those that be liver-sick, and do ease cramps, convulsions, and the falling sickness; if condited, or preserved with sugar, they are exceeding good to be given to old, and aged people that are consumed, and withered with age, and which want natural moisture." Boerhaave thought the root "a principal aperient." Dryden, in his translation of Juvenal's Satires, tells of certain revellers:—

"Who lewdly dancing at a midnight Ball,
For hot Eryngoes, and fat oysters call."

Irish Moss, or *Carrageen*, which is abundant on our rocky coasts, is a marine lichen which has come under notice here in a former section, together with Iceland Moss.

The Bladderwrack, or Kelpware, is a coarse-looking Seaweed found in heavy brown masses on most of our coasts. It is known quite commonly by the characteristic bladders studded about the blades of the branched, narrowish fronds; these bladders being full of a glutinous substance which makes the

weed valuable both as a medicinal remedy against the glandular troubles of scrofula, and as an external embrocation, when the fronds are bottled in rum ; such a liniment is specially beneficial for strengthening the faulty limbs of rickety, or bandy-legged children. Dr. Russell has recorded excellent success in dispersing scrofulous enlargements by rubbing in the soapy resolvent mucus which is found within the vesicles of the Bladderwrack. He advises friction of the tumours with these vesicles bruised in the open palms, and afterwards washing the parts with sea-water from the ocean. Remarkably enough, it is reported by a professional diver that one of the strange effects of diving beneath deep water is the bad temper invariably felt while working at the bottom of the sea. As this sensation passes away almost always immediately after the surface is again reached, it is probably caused by the pressure of the air affecting the lungs, and through them the circulation of blood in the brain. *Per contra*, the exhilaration, and good temper of the mountain climber, represent quite opposite feelings, as derived from precisely different physical conditions. In this way the passion which seems to infatuate some enthusiastic mountain climbers, time after time, may be accounted for.

An analysis of the Bladderwrack has shown it to contain an empyreumatic oil, sulphur, earthy salts, some iron, and iodine freely ; thus it is very rich in anti-scrofulous elements. The fluid extract of this Seaweed has the long-standing reputation of safely, and surely, diminishing the bodily fat when in excess. It is given for such purpose three times a day, shortly after meals, in doses of from one to four teaspoonfuls. The remedy must be continued perseveringly, whilst cutting down the supplies of fat, starchy foods, sugar, and malt liquors. When taken in a like way, (or in the concentrated form of a bolus, if preferred), the Bladderwrack extract will specifically relieve rheumatic pains. Furthermore, a sea-pod liniment is dispensed by many seaside chemists ; also a sea-pod essence for applying wet on a compress, towards dispelling strumous tumours, goitre, and enlarged neck glands ; likewise for old strains, and bruises. It is by reason of its contained bromine, and iodine, as harmless remedial elements, the Bladderwrack (*Fucus vesiculosus*) acts in reducing fatness by imparting a stimulation of the absorbent bodily glands to increased activity. In common with the other *Fuci* it furnishes mannite, an odorous oil, a bitter principle, mucilage, and ash (embodying the bromine, and iodine). For

internal use a decoction may be made with from two to four drachms of the weed to a pint of water, boiled together for a few minutes; and for external application, to enlarged or hardened glands, the bruised weed may be applied as a cold poultice. This Seaweed comes to perfection only during early, and middle summer. The kelp, or ash, of the weed is an impure carbonate of soda, containing sulphate, and chloride of sodium, with a little charcoal. Persons inclined to be inconveniently fat may at the same time profitably employ a partial, or modified Banting system of diet. Abstinence from sugar, a sparing use of bread (unless toasted, thin, and chippy), likewise of potatoes, and pastry, with a liberal supply of lean meat, whilst plenty of active outdoor exercise is taken, ought to sufficiently restrain the proportions of most individuals within comfortable limits. Of course the opposite plan should be adopted by lean subjects with a view to gaining fat. Such are the principles upon which animals also can be reduced in bulk, or fattened; but with respect to ourselves there are certain human beings who will always be lean, and anxious-looking, because of their peculiarly irritable, nervous organization, such as makes cellular changes in their tissues prejudicially active. Tennyson, in his *Vision of Sin*, points a gruesome moral as to these matters :—

> "Every face, however full,
> Padded round with flesh, and fat,
> Is but modell'd on a skull!"

Darwin has related, as illustrating how the quality of food can affect the nutrition of an animal, that the natives of the Amazon region feed the common green parrot with the fat of siluroid fishes, and the birds thus treated become of a plumage beautifully variegated with red, and yellow feathers.

The Sea-tang, known familiarly at the seaside as Tangle, Sea-girdles, or Cows' Tails, is of common marine growth, consisting of a wide, smooth, brown frond, with a thick, round stem, and broad, brown ribbons at the end of it.

> "Health is in the freshness of its savour; and it cumbereth the beach with wealth,
> Comforting the tossings of pain with its violet-tinctured essence."

When bruised, and applied by way of a poultice to scrofulous swellings, and glandular tumours, the Sea-tang has been found of valuable service. Its absorbent stem-power for taking up

iodine is very large, whereby this weed exercises remarkable virtues against the various forms of scrofulous disease, and signally relieves chronic rheumatism.

Again, Sea Spinach (*Salsolacca spirolobea*) is a salt-wort found growing on the Hampshire coast, and on other English shores, being the best of all wild vegetables for cooking as a dish, with succulent leaves shaped like worms, and possessing marked anti-scorbutic properties. Sea Kale, or Sea Colewort, was formerly thought to be injurious to the sight.

Another marine substance recently acquired for culinary uses is " Agar-agar," or Japanese Isinglass, as prepared from an East Indian Seaweed. Its gelatinizing power is double that of animal gelatine. To prepare this agar for use it is allowed to swell in cold water, and is then cut into small pieces, and dissolved in the liquid to be set, whether water, wine, broth, or milk. Seaweed is widely used for food in Japan ; it being a remarkable fact that the Japanese army subsists mainly upon a combination of Seaweed with rice.

At Berek, a watering-place in the Somme Department of France, the sand of the sea-shore is found to be highly remedial in spinal diseases, and kindred affections, principally for children ; they are buried up to their necks in a mound of the sand which has been washed by the waves at high tide. With characteristic national feeling a tri-coloured flag is planted on the top of the mound.

SHEEP. (*See* MEATS: MUTTON).

THE flesh of Sheep is less stimulating, and less nutritious than beef, and in general not so easily digested. Mutton fat often provokes indigestion because of its hircic acid. The remarkable alterative efficacy of the Sheep's throat gland (thyroid) when given as a medicinal food, on the recently discovered curative principle of healthy animal substances, corresponding to the same parts when morbidly affected in the human body, has been already explained. It is strikingly shown also in the reduction of excessive fatness, the vital energy being at the same time low, and mental sluggishness being a prominent symptom. One may note as a suggestive fact that this throat gland is often concerned in producing just such obesity, as, when dependent on other causes, this gland, if given as a medicine, will reduce ; but its extract,

as prepared by the chemist in a concentrated form, is not proper for aged persons with feeble heart. Obesity in persons of sedentary habits who take freely of carbohydrates in their meals, such as fatty things, starchy preparations, and sweet dishes, must be met by cutting off these matters, which are but incompletely used up under such conditions, and serve to encumber the system with excess of uric acid, so that rheumatic troubles are the result. Such patients should be kept almost exclusively on lean meat, with those vegetables which contain the least starch, and plenty of hot water between meals. In this way their system will be flushed, and further urates will be prevented; at the same time the excess of fat will be materially reduced. But, on the other hand, lean, spare persons of poor digestive powers, insomuch that animal food, being imperfectly, and incompletely appropriated, clogs the body with an excess of the meat elements as refuse urates, need an altogether opposite treatment for the rheumatic troubles which ensue. Under these conditions animal food is only to be allowed very sparingly, if at all, whilst light forms of carbohydrate nourishment should be liberally given. The paradox of a different line of treatment for rheumatism, apparently the same in both cases, but actually diametrically distinct, is thus explained. In the *British Medical Journal* (1901) mention has been made of a case of "desperate cancer, internal, in a woman, for which the Sheep's throat gland, in extract, was steadily administered, beginning with a dose of five grains daily, and soon increasing this daily dose to twenty grains. The result was little short of marvellous, seeing that a complete cure was thereby effected."

Arabs often eat raw Sheep's liver, or kidneys, seasoned only with salt. In Holland, and Germany, Mutton is held in disrepute. Remarkably enough, when considered in relation to the modern approved method of cure by fresh animal extracts, is the circumstance that Jesner, in the sixteenth century, prescribed as follows "for dotage, and diseases of the brain": "Cut off at a blow a young ram's head, and after removing the horns, boil it with the skin, and wool entire; and when it is well sodden, take out the brains, and mix them with a powder of cinnamon, ginger, nutmeg, mace, and cloves, heating them over a chafing dish, and stirring them so that they do not burn. This must be given to the patient, with bread, in an egg, or broth, for fourteen days, fasting being necessary both before, and after." Soup

may be made from Sheep's head, and from Sheep's "pluck"; on account of which latter designation the concoction has been named *heroic soup*. A baked Sheep's head is a "Field Lane Duck." A certain dining house at Rome was made notorious by the poet Horace, who contracted a severe fit of indigestion there by eating "Sheep's head," which dish he studiously shunned always afterwards. Some humorous incidents about cooked Sheep's head, or "jimmy," are told in *Kitchen Physic*. "Alice" (in *Through the Looking Glass*) "found herself all of a sudden in a small, dark shop, leaning with her elbows on the counter; and opposite to her was an old Sheep sitting in an arm-chair, knitting, and every now and then leaving off to look at her through a great pair of spectacles. 'What is it you want to buy?' said the Sheep at last, looking up for a moment from her knitting. 'I don't quite know yet,' Alice said very gently; 'I should like to look all round me first, if I might.' 'You may look in front, and on both sides of you if you like,' said the Sheep; 'but you can't look *all round you* unless you've got eyes at the back of your head.'" Mattieu Williams records, as an instance of educated appetite, and digestive capability, the case of a Sheep at a butcher's in Jermyn Street, London, which animal was well known by following the butcher's men through the streets like a dog. "This Sheep was seen on several occasions to steal Mutton-chops, and to devour them raw, preferring these to grass, or to other meat (beef). The animal enjoyed robust health, and was by no means ferocious."

Tallow is the coarse fat of Sheep melted down, chiefly for making candles. Richard Boyle (1696) has given, in his *Collection of Medicines*, a vulgar, but often approved, remedy for a cold, especially one that affects the breast: "Take half a sheet, or a sheet, of brown paper, of as even a texture as you can get, and anoint it evenly, and very well with the oldest tallow, or candle grease, you can procure, so that the paper may be thoroughly penetrated by it; then cover it thinly with grated nutmeg (as you were to put the spice upon a toast), and clap it warm to the pit of the stomach that it may reach a good way both above it, and beneath it." Another excellent old-fashioned application for a cold in the head, with stuffed nostrils, was to tallow the nose at night across the bridge thereof; but this practice, together with the tallow candles, and the snuffers then in vogue to keep them from growing dim, and from guttering

through gradual length of wick, are almost beyond the memory of the present generation. C. S. Calverley humorously writes respecting :—

"A patient of Skey's
Who is prone to catch chills like all old Bengalese ;
But at bedtime I trust he'll remember to grease
The bridge of his nose ; and preserve his rupees
From the premature clutch of his fond legatees."

Among other uncouth habits, Dr. Johnson would turn over the lighted candles head downwards to make them burn more brightly; and the melted tallow, or wax, would drop over the carpet.

On the third day of Dresden the energies of the Emperor Napoleon were impaired by the effects of a shoulder of Mutton stuffed with garlic, partaken of at dinner. The habit of eating fast, and carelessly, is believed to have incapacitated his judgment, and action, on two of the most critical occasions of his life,—the battles of Borodino, and Leipsic. The general order to his household was to have cutlets, and roast chicken, always ready ; and this was observed to the letter by his *Maitre d'hotel*, Dumand, who had been a famous cook.

In cases of extreme bodily exhaustion, as in an advanced stage of continued fever, and similar states of extreme illness, the reeking hot fleece from a newly-slaughtered Sheep has been savingly employed to restore vital warmth by enwrapping the sick person therein. This remedial method is practised throughout Afghanistan, and was told of by Homer. A Sheep is killed, and skinned ; then straightway a little oil of turmeric is rubbed over the inside of the fleece, within which, whilst it still steams with heat, the patient is enveloped. Childe, Lord of the Manor of Plymstock, when benighted on Dartmoor in a snowstorm, killed his horse, and got within the body to save his life, being presently found therein by the Benedictine Monks of Tavistock. Again, Sir Walter Scott, in his childhood, became lame from paralysis, and was ordered "as often as a Sheep was killed for the household use, to be stripped, and swathed up in the skin, warm as it was, just flayed from the animal's carcase." "In this Tartar-like habiliment I well remember lying on the floor of the little parlour in the farmhouse, while my grandfather, a fine old man with white hair, used every excitement to make me crawl." In earlier times our English King, James the First, who was passionately fond of the chase (but suffered from those

gouty, and rheumatic twinges which too emphatically reminded the Stuart, in the autumn of his days, how "every inordinate cup is unblest, and the ingredient thereof a devil"), invariably, whenever a deer was run down, and killed, would plunge his unbooted limbs within the beast's warm, reeking entrails. This remarkable panacea was advised by the Court Physician, Sir Theodore Mayerne, as the "sovereign'st thing on earth" for the said rheumatic troubles. The oil of Sheep's wool, now known as "lanolin," has recently come into extended medical use; it is the wool fat, or *suint*, being prepared from the purified cholesterin fat of lamb's wool; it is stable, not drying quickly, and not supporting germ life, being therefore an admirable foundation for ointments. Also, as a basic constituent of mutton fat (tallow), the syrupy fluid known as glycerine subserves certain culinary uses with remedial effects, though it takes rank more as a drug than as a food. Nevertheless, it is sweet to the taste, and makes a capital addition to foods instead of cane sugar for diabetic persons; furthermore, it obviates constipation when taken by the teaspoonful, and repeated every two, or three hours if needed. It can occupy the place of cod-liver oil for consumptive patients who do not tolerate that fish product, being given to the extent of two ounces a day; it will further help to dissolve gravel when this is observed to occur in the urine; and it promotes the efficacy of red bone-marrow if combined therewith as a special nutriment for the recruital of bloodless patients after hæmorrhage, or loss of blood by accident. Probably the virtue which glycerine exercises as an antiseptic, is due to the withdrawal which it effects of some of the water from the substance of invading microbes, such attraction for water being possessed by glycerine to a singular degree; it is undrying, and remarkably solvent. A small dose thereof will admirably quench intolerable thirst when the amount of liquids allowed to a patient has to be restricted. Against gall-stones, and the colic which they cause by their obstructive presence, the daily taking of from two to four teaspoonfuls of glycerine in some alkaline water has proved most efficacious. Also for flatulent indigestion, with acidity, a dose of glycerine (one, or two teaspoonfuls) will generally afford immediate relief. For a troublesome cough it is often of service to mix a tablespoonful of glycerine with half a tumblerful of cold water, and to take one, or two, teaspoonfuls of this mixture pretty frequently.

SHELL-FISH.

Among edible molluscs (having soft skeletons) which possess certain curative properties, the Cuttle (*Sepia officinalis*) deserves notice. It is found in some of our European seas, being known to Cornish fishermen as *Squid*, or *Cuddles*. It lives in shallow water, owning a broad internal bone-plate, and under its throat a bladder, or bag, containing a humour which is blacker than ink; such juice (*Sepiæ succus*) being discharged defensively into the surrounding water when the creature is pursued, so as to intercept the sight of the fishermen; it is dried, and used commercially in this country as a pigment for artists, and as a medicine of considerable efficacy. The Cuttle finds a place in fishermen's baskets all along the sea-coasts of France, and Italy, being sold for cooking in oil, and offered in the streets to passers-by, with the commendatory words "It is good, very good." Broths made from this mollusc were esteemed of old for remedying urinary troubles, and several diseases of the skin. Athenæus taught how to concoct a Cuttle sausage; and in the present day about the Neapolitan markets may be seen the arms, or tentacles of this fish cut up into portions, ready for cooking. In Greece a black broth is prepared by the poor, and is found to be excellent when composed of small Cuttlefish (including their ink-bags) boiled up with rice, and other vegetables. Modern Greeks, and Romans deem Cuttle eggs (which are to be found in clusters on the beach) a great delicacy. The shell, or bone-plate, is known technically as the "sepiostaire," or "pounce." A sauce of reduced Espagnole, coloured deeply by ink from the bag of this mollusc, is sent to table, together with the cartilaginous plate at the back of the creature, trimmed, and stewed. It is attractive, refined, and digestible. The black humour which the Cuttlefish discharges into the sea when pursued, possesses distinct medicinal properties. Its primary, and essential toxic action when given in considerable doses is to cause congestion of the veins, first about the liver, and biliary organs, and then throughout the body. If administered in reduced quantities, Cuttle-juice lessens venous turgidity, particularly for women about the child-bearing organs. Likewise for persons of each sex, sluggish piles become materially relieved by taking the Sepia juice sufficiently diluted. In token, as it were, of the frequent juxtaposition of certain maladies in some particular

quarter, and their appropriate remedies, the Cuttlefish is found on the sea-board where torpidity of the liver, piles, and congested states of the veins specially prevail. The Romans invariably took out the eyes of the Cuttlefish before cooking it.

"Age, nunc jam
Jube oculos elidere, itidem ut sepiis faciunt, coqui."

Futhermore, the Cuttle-juice has proved specific for curing recent ringworm.

SLEEP-INDUCING FOODS, and DRINKS. *(Dietetic.)*

It may be said broadly that sleeplessness is either because of an offended stomach (through food wrong, or in excess), or because of a brain insufficiently sustained, and therefore unquiet. For the former condition a spare, light, and soothing diet, especially towards night, must be adopted; for the latter state cordials, and stimulating support are rather indicated. Several alimentary substances appropriate to each of these causative states have been explicitly considered in previous pages here, such as, (for dyspeptic wakefulness) Fish at the evening meal, the Hop, Lemon Squash, Lettuce, Liquorice, Oat tincture, Onions, Orange-flower water, water hot at night, and whey: for the latter form of restlessness, Alcohol, Ale (bitter), Coffee, Condimentary Spices, Cowslip wine, liqueurs, and possets have been commended. Chaucer, in the *Canterbury Tales* (Nun's Priest's story of the Cock, and the Fox) makes Dame Partlet of the poultry yard bid her Lord Chanticleer "pay no regard to Dreams, which come of red choler, but for the love of Heaven to take cooling herbs, dogwood berries, or ground ivy that is growing in the yard: pick them where they grow, and eat them. Come! be merry, my dear husband; for the sake of your father's kindred do not be afraid of Dreams." In his *Religio Medici* Sir Thomas Browne has reflected thus deeply: "I thank God for my happy dreams, as I do for my good rest; for there is a satisfaction in them unto reasonable desires, and such as can be content with a fit of happiness; and surely it is not a melancholy conceit to think we are all asleep in this world, and that the conceits of this life are as mere dreams to those of the next,—as the phantasms of the night to the conceits of the day; there is an equal delusion in both, and the one doth seem to be

but the embleme, or picture of the other; we are somewhat more than ourselves in our sleeps, and the slumber of the body seems to be but the waking of the soul. It is the litigation of sense, but the liberty of reason; and our waking conceptions do not match the fancies of our sleeps. We term sleep a death, and yet it is waking that kills us, and destroys those spirits that are the house of life; a death which Adam dyed before his mortality; a death whereby we live a middle, and moderating point between life, and death; in fine, so like death I dare not trust it without my prayers, and a half adieu unto the world, and take my farewell in a colloquy with God. This is the dormative I take to bedward; I need no other Laudanum than this to make me sleep; afterwards I close mine eyes in security, content to take my leave of the Sun, and sleep unto the Resurrection." In similar strain Charles Lamb has written (*Popular Fallacies*): "It is good to have friends at court; the abstracted media of dreams seem no ill introduction to that spiritual presence upon which in no long time we expect to be thrown; we are trying to know a little of the usages of that colony,—to learn the language, and the faces we shall meet with there, that we may be the less awkward at our first coming among them. We willingly call a phantom our fellow, as knowing we shall soon be of their dark companionship. Therefore we cherish dreams." "A word of admonition," wrote Robert L. Stevenson, "is never out of place against working the young brain beyond its powers, or its endurance. We have all at our bedsides the box of the merchant Abudah, and, thank God! securely enough shut; but when a young man sacrifices sleep to labour let him have a care! he is tampering rashly with the lock." "Abudah" (in the *Tales of the Genii*, 1765) "is a wealthy merchant of Bagdad who sets out in quest of a talisman, which he is driven to seek by a little old hag who escapes from a chest, and haunts him every night, making his life sleepless, and wretched. He finds at last that the talisman which will free him from this hag (conscience) is 'to fear God, and keep His commandments.'"

On the other hand, it is contended by some competent authorities that too much sleep deadens the senses, and weakens the vitality; in favour of which view striking examples may be given of persons distinguished for energy of mind, and body, who have allowed themselves but little sleep throughout a long,

and active career. Napoleon managed his greatest campaign whilst sleeping for only four, or five hours a night. Brunel, the famous engineer, worked for twenty hours a day, and rarely went to bed; he slept for two, or three hours in his arm-chair, and was ready at early dawn for the work of the day; he is said to have never seemed tired, or out of spirits. Humboldt is recorded as saying: "As I get old I want more sleep,—four hours at least. When I was young two hours were quite enough for me." He died at the age of eighty years. Littre, the great French philologist, spent nearly twenty years in compiling his *Dictionary;* and during all that time he never stopped work until three o'clock in the morning, and was at it again before eight o'clock a.m. He lived to be eighty. It was John Wesley's dictum that "six hours should be allowed for sleep to a man, seven to a woman, and eight to a fool."

SNAILS.

In Pliny's day the Snail (*Limax*) was given, when beaten up in warm water, for coughs. It has been used in medicine from very old times. The Romans were very partial to (Apple) Snails, which they fattened in special cochlearia, feeding them with bran soaked in wine until they attained quite large dimensions. Charles the Fifth of Spain died of indigestion brought on by eating immoderately of Snails. In this country the early mediciners likewise prescribed Snails. In the *Arcana Fairfaxiana* it stands ordered: "For one that cannot make water, take Shell Snayles, and take out the Snayle; wash the shells very cleane, drye them, and beate them into powder; then take ye powder, and drinke it in white wine, or els in thyn broth." Halliwell quotes a still older recipe about slugs: "Take the rede Snyle that crepis houseles, and stepe it in water, and geder (gather) the fatte that comes of thame." Mrs. Delaney, again (in 1758), advised that "Two or three Snails should be boiled in the barley-water which Mary takes, who coughs at night; she must know nothing of it; they give no manner of taste." Apple Snails (*Helix pomatia*) such as are cultivated on the Continent for the table, and for medicinal purposes, are found but seldom in England, and only where Roman remains still endure. The first importation of Snails into England has been attributed to Sir Kenelm Digby (1645) for his wife. Also the

Apple Snail was brought to the South Downs of Surrey, and Sussex, as well as to Box Hill, in the sixteenth century, by one of the Earls of Arundel for his Countess, who dressed, and ate them to promote the cure of consumption, from which she suffered. Paris alone at the present time uses up about thirty-eight millions of Snails yearly. They did not come really into French vogue until the return of Louis the Eighteenth (in 1814), on which occasion the Bishop of Autun entertained the Emperor Alexander of Russia. This popular host, who was a famous gastronome, had in his service a most accomplished cook, the best in Paris at that time; they put their heads together, and hit upon Snails as the most suitable novelty for presenting to the Imperial guest. Together with this dish, which was handed round, there appeared on the card, under the heading "*Escargots à la Bourgignonne,*" a description of the delicious seasoning with which each shell was filled up. The same dish was straightway adopted in Paris for the "*Dejeuner à la fourchette.*" Within the last year spurious Snails, made from calves' liver (boiled), have been found in Paris as artificially put upon the market in place of the *Helix pomatia*, or edible Snail; they are, of course, much to be reprobated. In 1854 M. de la Marr, of Paris, set forth the virtues of *helicin* as a glutinous extract obtained from Snails, and which had long been given in broth as a successful domestic remedy for pulmonary phthisis. Against consumptive disease of the lungs the Snails are not only eaten, but also crushed in their shells, and rubbed over the back, and chest, the Snail juice being deemed by some superior even to cod-liver oil.

Gipsies are great Snail-eaters, but they first starve these gasteropods, which are given to devour poisonous plants, and must be rendered free from the same, for it is certain that Snails retain for a while the flavour, and odour of the vegetables on which they feed. According to a gipsy, the common English garden Snail (*Helix aspera*) is quite as good to eat as the Apple Snail, but there is "less of him." In gipsy language the Snail is a "bauri." Some think that those Snails are the best for eating which have lived through the winter. English Snails are preferred when first soaked in salted water, and then cooked, being pulled out of the shell with a pin, like winkles, to be eaten with pepper and vinegar. For consumptive persons they should be cooked in milk. Collecting Snails is carried on in the French provinces all day long, by men, women, and

children, who with iron hooks search for them at the foot of thorn hedges, and under ivy, and, in winter, about old walls. If lucky, a good searcher will gather from one thousand to fifteen hundred Snails. The large white gasteropod is in special demand about Paris, whilst the garden and wood Snails are in common use among poorer consumers throughout all parts of France. In Paris the *Escargots* (as Snails are called), being dried, are concocted into lozenges for a cough. To help weak eyes, in Hampshire Snails are made into a poultice with soaked bread-crusts. The glutinous constituent, "helicin," may be given in broths. Snails can be made into soup, or eaten *a la huitre*, with vinegar, and pepper, and salt. For soup, "first wash them, then put them into cold water quickly brought to the boil; remove the shells; add an equal part of well-flavoured vegetable stock, and directly it boils take out the Snails; thicken the soup with flour, butter, salt, and pepper, to taste; then add the yolk of an egg; boil up again; put back the Snails, and serve" (*Tramps' Handbook*). Again, a recipe of Dr. Walser for curing chronic catarrh orders to "take five garden Snails out of their shells, cut them up small, and put them into half a pint of veal broth in which a carrot has been boiled; cover up, and let it stew until the Snails fall to the bottom; strain through a sieve, and drink a teacupful daily. The broth will give ease against spasmodic coughing." As a curious old recipe for "Syrrop of Snailes": "Putte House Snailes in a baskett, putte fennel in the bottom, middle, and top of them; cover them very close; lett them stand twenty-four hours; wipe them very cleane with a coarse cloth; prick them with a bodkin, and stop their mouths with Lisbon sugar; putt them in a sieve with their mouths downwards, and sprinkle a little rosewater all over them. Let them stand till the sugar is dissolved, and the syrup drops clear in a dish; take it off for present use without boyling. For to keep, putt it on the fire, lett it just boyl, scum it very clean, take it off, and keep it till the next day, then bottle it." Dr. Yeo tells that "the edible Snail has been called 'the poor man's oyster.'" It may be eaten raw, with salt, pepper, and vinegar. Spenser, in his day, suggested this.

Sweet syrups are still made from Apple Snails for colds, and sore throats, because of the emollient mucilage which they furnish with their special constituents, helicin, and limacin. Another

old recipe, "excellent for one that is in a consumption," ran as follows: "Take Garden Snails, break their houses, and remove them whole; do not wash them, but put them into the strokings of milk, and set them on the fire together till they be ready to boyl, but let it not boyl; then strain it, and drink it warm,—a draught each morning, and at four o'clock in the afternoon, and at night last." Quantities of Garden Snails are packed in old cases, and sent to America as delicacies. The glass men at Newcastle have a Snail feast once a year; they collect the Snails in the fields, and hedgerows, on the Sunday before this anniversary. Again, Francatelli, an eminently sensible chef, considerate for the cottager no less than for the lavish epicure, advises thus in his *Modern Cook*: "Take two, or three Garden Snails; add to these the hind-quarters only of two dozen stream-frogs previously skinned; bruise them together in a mortar, after which put them into a stewpan with a couple of turnips chopped small, a little salt, a quarter of an ounce of hay saffron, and three pints of spring-water. Stir these on the fire until the broth begins to boil, then skim it well, and set it by the side of the fire to simmer for half an hour, after which it should be strained by pressure through a tammy cloth into a basin for use. This broth, from its soothing qualities, will often successfully counteract the straining effects of a severe cough, and will alleviate more reliably than any other culinary preparation the sufferings of the consumptive." Birds'-nest Soup of the East, and Snail Soup of the West, are nearly allied to each other. The Ashantees, and other African tribes smoke Snails, and eat them as daily food all the year round. The *London Gazette* of March 23rd, 1739, tells that "Mrs. Joanna Stephens received from the Government of that time five thousand pounds for revealing the secret of her famous cure for stone in the bladder, and gravel. This consisted chiefly of egg-shells, and Snails, mixed with soap, honey, and herbs. It was given in decoctions, powders, and pills." Some do report that a calculus, or bladder stone, when taken out of the human body will, if wrapt in chamomile flowers, become speedily disintegrated, and will crumble away; so that for stone in the bladder, or kidneys, a strong infusion of chamomile flowers (virtually chamomile tea), if taken systematically every morning while fasting, and each night at bedtime, should be effectual to disperse it. Pepys, in his *Diary* (1663), wrote: "April 1st, this being my feast in lieu of what I should have

had a few days ago for my cutting for the stone, for which the Lord make me truly thankful! Very merry at, before, and after dinner; and the more for that my dinner was great, and most neatly dressed by our owne only mayde. We had a fricasee of rabbits, and chickens, a leg of mutton boyled, and three carps in a dish, a great dish of a side of lambe, a dish of roasted pigeons, a dish of four lobsters, three tarts, a lamprey pie (a most rare pie!), a dish of anchovies, good wine of several sorts, and all things mighty noble, and to my great content. Mrs. Wright, and I, and the rest of the women, with Roger Pepys."

Snail shells in powder are "lithontriptick, and good for the gravel; they cure clefts, or chops in the hands, lips, or fundament." Southey has told in *The Doctor* that any "chafing of the skin is instantly relieved by the slime of a Slug; put the Slug on the sore place, it heals you, and you need not hurt it; the part once slimed the Slug may be let go." The liver of Slugs yields sugar. As medicines both Snails, and Slugs are best eaten raw because of their coagulable albumin (like the white of egg) then remaining soft. Lister speaks of Snails seasoned with oil, pepper, and salt. Uric acid is produced in Slugs, and Snails, by an organ (the *saccus calcareus*) which is supposed to be the first vestige of a kidney; this uric acid has been turned (by Dr. Prout) into a purple colour of great beauty (*murexide*). Mr. Wood makes mention of a certain old dame who used to search in the hedges for Snails for converting thereby the milk she sold into cream; this she did by crushing the Snails through a piece of linen, whilst squeezing their juice into the milk. Lady Honeywood's "Snail-water" was well known in the seventeenth century. "Take a quart of shelled Snails, wash them in salt, and water, then scalld them in boyling water; then distill them in a quart of milk upon white sugar candy, and a branch of speremint." An old nursery distich of Dame Gammer Gurton's has quaintly related how:—

"Four-and-twenty tailors
Went to kill a snail,
The best man among them
Dur'st not touch its tail;
She put out her horns,
Like a little dun cow,
Run, tailors, run,
Or she'll kill you all now."

" Sex quater exibant sartores impete magno
Viribus ut junctis limax spumosa periret.
Nec fuit e numero qui auderet tangere caudam !
Cornua nam extrudens sœvissima sicut in agris
Vacca rubens et nigra, croci continente colore
Illa suos hostes tremefecit. Abite fugaces
Sartores ! vos dira manent dispendia vitæ,
Præsentem que viris intentant omnia mortem ! "

In France a rustic application to scrofulous swellings is often used with success, which consists of garden parsley, and Snails, pounded together in a mortar to the consistence of an ointment. Some of this is spread on coarse linen, and applied fresh every day freely. The curious gourmet may taste a dish of Snails any day in London at a Restaurant (Gaudin's) in Greek Street, Soho, where the front window displays a legend "*Escargots à la mode de Bourgoyne,*" to be eaten on the premises, or "*a emporter*, 10d. *le douzaine*": basketfuls thereof are exhibited, the open mouths of the shells being stuffed with bread, and herbs. Some big, round fellows (selected) are at four shillings the dozen; they may be taken home, and cooked according to one's own ideas, perhaps "*à la mode de Shepherd's Bush.*" Many quarts of cooked Snails are sold every week to the labouring classes in Bristol. Defoe, writing in 1722, detcribed a cook's shop "where you may bespeak a dinner for from four, or five shillings to a guinea a head, or what sum you will; the *menu* of one of these guinea dinners containing among other curious items a 'ragout of fatted Snails,' also 'chicken two hours old.'" Erasmus, in his colloquies, refers to the slow pace at which a Snail makes progress. "I see what haste you make, you are never the forwarder; you go a Snail's gallop." The Mock Turtle said with a deep sigh to Alice (*in Wonderland*), "Once I was a *real* Turtle"; then he sang very slowly, and sadly :—

"'Will you walk a little faster ?' said a Whiting to a Snail,
'There's a Porpoise close behind us, and he's treading on my tail:
See, how eagerly the Lobsters, and the Turtles all advance !
They are waiting on the shingle—will you come and join the dance ?
Will you ? won't you ? will you ? won't you ? will you join the dance ?
Will you ? won't you ? will you ? won't you ? won't you join the dance ?

"'You can really have no notion how delightful it will be
When they take us up, and throw us, with the Lobsters, out to sea !'
But the Snail replied, 'Too far, too far !' and gave a look askance—
'Said he thanked the Whiting kindly, but he would not join the dance:
Would not, could not, would not, could not, would not join the dance;'"
Would not, could not, would not, could not, could not join the dance.'"

Colonel Newnham Davis, a true gastronome, has recently given it as his dictum, "I would not counsel anyone ever to eat a Snail." He made two attempts in the cause of gastronomy, and under the best possible conditions; "yet," he says, "they are distinctly unappetizing: their appearance is greatly against them, and they taste like gravel cooked in mock turtle soup."

SORREL. (*See* HERBS).

SOUPS. (*See* BROTHS).

THE title "Restaurant," which is now applied to a high-class eating-house, was originally the name of a soup, as invented by a Frenchman, M. Palissy, in 1557. This soup consisted of fowl (finely minced), with broth (highly spiced), and containing cinnamon, coriander, etc. In 1765 a Tavern was opened in Paris under the above title "Restaurant" for the purpose of supplying the said famous soup of that designation; and hence the name has become handed down to an eating-house ever since. "Gerarde, the young Monk-student" (*The Cloister and the Hearth*, 1860), "when going to Rotterdam on his start in life, rescued by the wayside an exhausted old scholar with some soup which had been provided for himself by his thoughtful mother before he left home. 'Hippocrates, and Galen!' cried the resuscitated old man, ''tis a *Soupe au vin*, the restorative of restoratives! blessed be the nation that invented it, and the woman that made it, and the young man that brings it to fainting folk. Now this divine elixir gives in one moment force to the limbs, and ardour to the spirits; and if it had been taken into Hector's body at the nick of time it would, by the aid of Phœbus, Venus, and the blessed Saints, have most likely procured the Greeks a defeat. For, note how faint, and weary, and heartsick I was a minute ago! Well, I suck this celestial cordial, through a straw, and now behold me brave as Achilles, and strong as an eagle.'"

It is quite a rational thing to begin dinner with soup, since the meat-extractives, and gelatin of a clear soup, are well calculated to promote a flow of gastric juice in the stomach, so as to further the complete digestion of the solid food which follows. As a French writer has said, "Soup should be to a dinner what the overture is to an orchestra, or what the porch is to a house." If a solid meal is intended, a light soup should

precede it; but if the soup itself is to be the *piece de resistance*, then it should certainly be chosen "thick." But hot Soups in summer at the commencement of dinner are now becoming discouraged, and put out of favour; a small cupful of cold consommé, made from fine stock, is found to suit the digestion better; while thick Soup at this stage of the meal is almost entirely given up, the cold consommé instead being served in little cups, either of plain white ware, or of costly china. True consommé is strong broth obtained by boiling meat with vegetables, and concentrating the extract to the point of slight browning, or caramelization; it is then used for Soups, and sauces; the present habit of London cooks to call their dish-water Soups "Consommés" should be condemned by every lover of honest fare. There is distinct evidence in favour of taking a moderate quantity of plain Soup at the commencement of a meal, as shown by the experiments of Schiff, and others; which have proved that solutions of dextrine, and of infused meat, favour the secretion of pepsin as a digestive of the meal which ensues. Abroad the first course sometimes consists of beer, with spices, and rusks, or, in summer time of strawberries, and milk, to both of which substitutes the name Soup is given.

It is to be remembered that the water used in making a Soup not only dissolves certain salts, and tissues, of the meat-substance by the action of heat, but it also hydrates, or forms into water-combinations (with altered qualities) some of the constituent elements of the ingredients used. Foods are foods only by reason of their chemically-combined water in various proportions.

Par excellence Turtle Soup, as served at the Lord Mayor's Dinner in London, on the ninth of November, takes the lead amongst these concoctions. It consists of Green Turtle, with basil, marjoram, thyme, parsley, cloves, allspice, mace, nutmeg, and sherry.

"Beautiful Soup, so rich, and green,
Waiting in a hot tureen;
Who for the dainty would not stoop?
Soup of the evening, beautiful Soup!
Soup of the evening! beautiful Soup!

Beau——ootiful Soo——up!
Beau——ootiful Soo——up!

Beautiful Soup! who cares for fish,
Game, or any other dish?
Who would not give all else for two-p
-ennyworth only of beautiful Soup?
Pennyworth only of beautiful Soup?"

(*Refrain as before.*)

Of all Soups that which is most highly esteemed, both for its supreme restorative qualities, and for its exquisitely luscious flavour, is that made from the Green Turtle (*Chelonia mydas*), either when combined with costly adjuncts, and spicy condiments for the Aldermanic gourmet, or when delicately prepared, as a concentrated form of the most highly sustaining Invalid Turtle for a patient in desperate strait. "*Grata testudo dapibus deorum*," said the Roman poet Horace concerning this amphibious reptile, so beloved by epicures,—"Food fit for the gods!" Its dainty parts are the *calipash*, or large shield of the back, and the *calipee*, or shield of the belly (*plastron*); also Turtle steak, and Turtle fin. When plainly cooked Turtle flesh is easy of digestion. It was during the early part of the eighteenth century that Turtle Soup became a standing dish at civic banquets. Dr. Pereira has described Turtle flesh as "an appetizing, and wholesome aliment, nutritive, and light of digestion, yielding by decoction highly restorative broths which are much to be valued in consumptive diseases, and in other illnesses requiring concentrated light support." The Green Turtle is plentiful about the Island of Ascension; it lives upon vegetable substances, mostly seaweeds, and furnishes a very pure limpid oil, which is employed for various purposes, one being for burning in lamps. The flesh contains less fat than would be supposed; it consists of three parts water, and in the remaining solids fat occurs only in the proportion of about one-half. The flesh when cooked is rich in gelatine, poor in fibrin, and yielding little, or no osmazome; the green fat is of a greenish-yellow colour, giving this Turtle its distinctive name. The softer parts of the shields, and fins, are cut into squares when cold, or into oblong pieces, these constituting the favourite morsels in Turtle Soup, and being often erroneously mistaken for the green fat by complacent eaters; the green fat will communicate a green colour to the urine. Mock Turtle Soup is made either with Sturgeon flesh, or with the glutinous scalp integuments of the calf's head. American cookery books order the addition thereto of "as

much curry powder as will lie on a shilling." Plain Turtle Soup is often concocted from dried Turtle after it has been sufficiently soaked, seasoning this with a little salt only. "The Tortoise" (says Clarke, 1678), "which they call Turtle, eats like veal." In May large numbers of the same come ashore to lay their eggs, which are much esteemed, and are eagerly sought for. The Turtle digs a hole in the sand, and deposits its eggs therein, then proceeding to cover them over. For ascertaining where the nest is located a sharp stick, or iron rod, is used to prod the ground. The edible Tortoise (*Sculpetje*) supplies restorative food for children who are atrophied, or wasting away; the juice of the boiled flesh to be taken when strained. It is remarkable, by correspondence, that the vitality of the Turtle is wonderful, and its strength prodigious. If you want to kill him he clings to life with a tenacity almost ridiculous. Redi, the well-known Zoologist, deprived a large Turtle of its head, and it insisted upon living for twenty-three days afterwards. Another Turtle, which had its head cut off in the evening by the cook, knocked him down the next morning with its fin. A quart of real Turtle Soup, with the same quantity of good stock, makes an excellent combination. Add a small piece of lump sugar. All Soups should have a little sugar added.

Dr. Haig admonishes that "Meat Soup contains one decimal our per cent of uric acid, or xanthin, which is objectionable for gouty persons. Soup Maigre is made without meat. "Take a well-grown Savoy Cabbage, *i.e.*, one possessing a good green heart; wash it thoroughly in salt, and water, and trim off the outer leaves, putting it in an earthen crock, and pouring on sufficient boiling water to entirely immerse it; cover, and stand it aside for a quarter of an hour, when it will be ready to be sliced with a sharp knife, and mixed with three onions, a couple of small turnips, and a large carrot, these having been previously chopped into dice. Melt two ounces of dripping in a stewpan, put in the various ingredients, and cook them through (without browning them in the least degree,) which process will extract the flavour. Next, wash, and drain a quarter of a pound of pearl barley, throw it into the pan, and pour in a quart of boiling water, simmering the whole slowly for two hours, or more, according to whether, or not, the barley becomes soft; and, at the end of that time, if, as will probably be the case, the Soup is too solid, liquefy it with another pint and a half of boiling

water; no straining will be required; but flavour with salt, and pepper to taste, and serve with sippets of crisp, toasted bread."

Nevertheless, the extractives of meat have unquestionably a marked effect on the digestive organs when conveyed thereto in the form of good animal Soup; they are the most powerful stimulators of gastric secretion that we possess, and thus they are eminently calculated to rouse the appetite, and aid the digestion of any food with which they may be taken. This is, indeed, their true *rôle*, both in health, and in disease; they are flavouring agents, and their proper place is in the kitchen, not by the bedside. Sydney Smith, writing about one of the Utilitarian School, said: "If everything is to be sacrificed to utility, why would you bury your grandmother? Why not cut her up into small pieces, and make portable Soup of her?"

For a simple Potato Soup ("*Potage parmentier*"): "Wash, and peel six, or eight Potatoes, put them into a saucepan with two onions cut into quite small pieces, and three pints of cold water. Bring them to a boil, and when perfectly tender (in thirty-five, or forty minutes) pour the whole through a sieve. Return it to the fire, and season with pepper, and salt, a pinch of grated nutmeg, and a lump of butter the size of walnut; bring it again to the boil, stir in quickly a cup of new milk, and serve.

Julienne Soup, a vegetable clear concoction, was first made by a cook named Jean Julien, in 1785. Olla Podrida was a Spanish Soup in the spring season, named from *Olla*, Soup of animal and vegetable matters stewed together, and *Podrida*, simmered.

With respect to strong, clear Soup for the invalid, or the aged person, "It may be a useful means," says Dr. Hutchison, "of rousing the appetite, and stimulating the digestive powers of the stomach, but it cannot be regarded as a serious contribution to nutrition in itself." Some light cereal food must be added at all events. Pope Leo the Thirteenth was dieted at ninety-three almost exclusively on chicken broth, with bread in it; two small glasses of Bordeaux were his daily allowance of wine. "*Ah! si la jeunesse savait: si la veillesse pouvait.*"

"There sat an old man on a rock,
And unceasing bewailed him of fate
(That concern where we all must take stock,
Though our vote has no hearing, or weight!).

And the old man sang him an old, old song,
For he sang the song 'Too late! too late!'
He sang the song 'Too late!'

While we send for the napkin the soup grows cold,
While the bonnet is trimming the face grows old,
When we've matched the buttons the pattern is sold,
And everything comes too late, too late,
And everything comes too late."

Ox-tail Soup, being made from what is really one of the most nutritive parts of the animal, is of wide reputation as the principal thick Soup for substantial repasts. To cook the tail it should be divided at the joints, and stewed with pieces of carrot, or other vegetable; some of the tail should be served in the Soup. At the beginning of last century the tail of an ox (which is now dearer than rump steak) cost only from sixpence to sevenpence; whereas an ox-tail of first quality will fetch at the present time half-a-crown, its amount of flesh being about a pound and a half.

SPARROW.

The House Sparrow (*Passer domesticus*) differs from the Hedge Sparrow (*Accentor modularis*), the former being a grain-eater, but the latter an insect-eater. The Cock Sparrow (*Passer*) is notoriously a lascivious bird; it "loosens the belly by its broth; being much eaten it excites venery; the youngest are best."

"This little cock sparrow shall make me a stew,
And his giblets shall make me a little pie too."

Sparrow pudding is an appetizing dish which strengthens the sexual organs. In early English days Sparrows were eaten commonly; they make an excellent pot-pie, with a flavour superior to that of Quails, or they may be substituted for Larks in a kidney pudding. The food of House Sparrows is 75 per cent of corn, one kind and another. The late Lord Lilford, a distinguished naturalist, has said: "I consider that every bird-catcher who confines his operations strictly to the taking of Sparrows is a benefactor, and should be subsidized by the parish authorities." His Lordship has further advised the shooting of Sparrows as they fly to, and from, the cornfields, as excellent practice for partridge shooting, each bird killed representing at least a bushel of corn saved. An old saying

has it that "The Spink, and the Sparrow, are the devil's bow and arrow." In the *Nawarth Accounts* for October, 1621, occurs an entry of purchase, "Sparrows, 2 dozen, iiiid." (fourpence.) They are supplied in America as "rice birds" for the market in large numbers. A well-known game, and poultry dealer in Albany "took in one thousand and seven hundred Sparrows last week, and sold them all." From *A proper new Book of Cookery* (1594) is copied the following receipt: "To stew Sparrows, take ale, and set it on the fire, and when it seeteth scum it, and then put in your Sparrows, and small raisins, sugar, and sinamon, ginger, and dates, and let them boil together; and then take marrow, or butter, and a little verjious, and keepe it close. And when it is enough, make sops in platters, and serve them forth." Our ancestors did not despise small "byrdys" at their public feasts. At a banquet given to his friends in the sixteenth century by John Stafford, when he was Bishop of Bath and Wells, the small byrdys were chiefly Sparrows, and they were cooked according to the recipe now formulated. It is told respecting the holy and humane Saint Francis of Assisi, (who was throughout his life on terms of familiar affection with all animated nature about him), that "as he breathed out his last sigh," at nightfall, October 2nd, 1226, in the Portiuncula, "innumerable larks alighted singing on the thatch of his cell, as if to salute the fond soul just taking flight."

SPICES.

(*See* CAPSICUM, CARAWAY, CINNAMON, CLOVES, GINGER, NUTMEG, PEPPER and SAFFRON.).

SPICES have been highly esteemed from remote antiquity, and were in very early times a principal article of merchandise; so important was this commerce reckoned for our cold climate that in primitive English history the Spicery was a special department of the Court, and had its proper officers. Spices were necessarily rare, and costly, in the fourteenth century, because having to be imported from the Levant. Among the recorded ingredients of old recipes we find Cinnamon (or Canella), Mace (Macys), Cloves (Clowe), Galyngal, Ginger, Cubebs, Grains of Paradise, Nutmegs, Caraway, and *Spykenard de Spagne*. Such Spices were in patriarchal days presents acceptable even unto a Monarch;

thus we read in the Old Testament, "Neither was there any such Spice as the Queen of Sheba gave King Solomon." In the middle ages of social England everything was spiced to death. The mediæval dinner consisted of only three courses, as against our seven or eight at the present time; but it is quite safe to say far more was eaten then than is partaken of now, the motto being of old, "Quantity rather than quality." As Traill writes, "The quantity was great, and the quality strong." Our modern housewives would be appalled at the outlay of the earlier English times on these items (Spices) of the store-cupboard. A bill for Ginger, Cloves, Mace, Cinnamon, Almonds, Nutmeg, Aniseed, Galingale, Long Pepper, Saffron, and Comfits, amounting to twenty-six pounds odd for the year would be rather startling nowadays, but this was deemed as essential then as the greengrocer's bill is to-day. We learn that even at present those persons who inhabit countries between twenty-three degrees north, and twenty-three degrees south of the equator employ numerous Spices daily with their foods, just as we make use of pepper; and a certain beneficial effect (stimulating, and carminative) is caused on the digestion thereby; likewise another secondary effect ensues, which is still more salutary, because of the fact that the volatile aromatic oils pass out of the body, mostly unchanged, through its various outlets, chiefly by the lungs, and skin. By this means nature has provided in the tropics antiseptics which, whilst escaping from the body by exhalations, destroy the hurtful microbes which are of necessity encountered in connection with mosquitoes, and other insects; these detest the volatile oils, and will not attack persons who take such Spices with their food. All condiments, with common table salt at their head, have a strongly preservative action, thereby neutralizing putrescent changes within the stomach, and bowels, on foods otherwise liable to quick decomposition.

Allspice (*Pimento*) is so named because it is thought to combine the flavours of Cinnamon, Nutmegs, and Cloves. It is the fruit of Eugenia Pimenta from the West Indies, which bears berries, violet when ripe, juicy, sweet, and highly perfumed, but very hot to the taste; they are eaten in great quantities by wood pigeons, thrushes, blackbirds, etc., which thereby acquire an exquisite flavour, and become very fat. For preparing Allspice condiment these berries are dried in the sun; whereto is very

appropriate the old proverb (of a double application), "If you crush Spice it becomes all the sweeter." For the relief of spasms, or internal colic, put a quarter of a pound of mixed Cloves, and Allspice, with some crushed Ginger, and Cinnamon, in a quart of the best brandy, and let this stand (bottled) in the sun, or by the hob for a few days until all the virtue is drawn out of the Spices. Then give as a dose one teaspoonful for an adult, (or ten drops for a young child,) in a small wine-glassful of water; also, if some of this be dropped on hot flannel, and applied externally, it will be found very effectual. For relieving local neuralgia a capital plaster may be made from Allspice berries, by crushing them, and boiling them gently down in quite a little water to a thick liquid extract, which can be spread on linen, and applied over the part in pain. Special virtues reside in the rind of the berries, through their combined savour of several stimulating spices. The berries themselves are somewhat sedative; because of their sweet savour, and cordial taste they are put into curry powder. Allspice tea, made by pouring boiling water on the crushed berries, through virtue of the volatile oil, exercises a sedative effect when flatulent indigestion is oppressive.

Recently the taking of Ginger, in the form of an essence, or strong tincture, is becoming revealed as a growing habit of inebriety both in this country and in America. Seeing that the alcoholic strength of such an essence, or tincture, is about double that of whisky, or brandy, the deleterious results of any excessive indulgence therein may be readily imagined. Many of the London chemists admit that they have regular customers for this pungent cordial, who buy it in comparatively large quantities every week. The Gingerists are persons with depraved stomachs, and over-wrought brains. But the issue of so baneful a practice is lamentably futile. After some relief to begin with, a completely disorded digestion, and a prostrate brain, are the inevitable consequences.

Though not usually ranking as a Spice, yet the *Olive*, as pickled in salt, and served with dessert for giving a relish to the wine, may fairly be considered a digestive condiment. The Spanish Olive is larger than that of Italy, or France, and is more esteemed. The Greeks appreciated Olives highly, insomuch that the Athenians called this fruit the gift of Pallas Athene, the Goddess of Wisdom. Likewise the Romans set great value on Olives;

(and their abundant oil,) such as are now imported into England, bottled when green, and unripe, and before the oil has become at all fully produced; the ripe fruit is of a dark colour, and forms a capital addition to the bread eaten by husbandmen in the Holy Land. Olive Oil was almost as important as honey in ancient cookery. The tree which produces it will live for a thousand years, bearing fruit all the time; one such tree, with gnarled trunk, twisted, and contorted into a most venerable appearance, growing near Mentone, is said to have been planted by Julius Cæsar. Spanish Olives are imported in small barrels. The Oil (*see* "Oils") is an essential ingredient for salads, and admirable for cooking purposes. In Portugal they refuse to gather the Olives till just beginning to turn purple, when they are bitter, and less digestible. French Olives are tasteless for cooking uses, though piquant of themselves when gathered young, and small. Spanish Olives, being soft, pulpy, free from sugar, and rich in vegetable oil, are good for diabetic persons. This oil is used in some parts of Europe for preventing the poisonous effects of vipers' bites, both locally, and internally. The ancient treatment of scorpions' stings was to anoint the wounds with the oil got from these creatures, as extracted by frying. A teaspoonful of Olive Oil is sufficient for an infant as an easy laxative.

SPINACH.

The *Lapathum hortense*, or Spinach, (of the Goosefoot tribe), as grown in our kitchen gardens, is actually a Persian plant which was brought to England during the sixteenth century; its spiny leaves have given it the name it bears, "Spinage," being the more correct spelling. The plant contains salts of potash abundantly. It is a light vegetable, of which the thick, succulent leaves are cooked, and eaten, being readily digested, and somewhat laxative. It is richer in iron than the yolk of egg, which in its turn contains more thereof than lean beef does. "Spinach," says Evelyn, "if crude, the oft'ner kept out of sallets the better; but its juice, when produced by boiling the leaves without adding any water, is a wholesome drink, and improves the complexion. What is known as the pigment ("*Spinage Green*"), as used for colouring, is the freshly expressed juice of this plant, or its precipitate. An excellent way of cooking

Spinach is to chop it up finely, and stew it in butter; if it be cooked in water this water will have a strong smell. A French physician styles Spinach "*le balai de l'estomac*," "the broom of the stomach"; people know the plant in France as "*Epinards*," whilst containing a small quantity of sorrel salt, the binoxalate of potash; they like it with much butter, and call it therefore "*la mort au beurre*." Their epicures teach "when eating it not forget the nutmeg." Brillat Savarin never had Spinach served to him on a Friday unless it had been cooked the Sunday before, and put each day over the fire with a fresh addition of butter. A wild species of Spinach, the "Good King Henry," or Margery, grows about rural England, particularly in Lincolnshire, where it is popular as a pot-herb in most cottage gardens. Another excellent way of dressing the ordinary Spinach is to "wash your Spinach well, break off the leaves, boil (without adding water, or only a drain) until tender, dry, chop fine, and fry in butter until thoroughly done; add a tablespoonful of white sugar, and mix thoroughly; place in a dish some toasted bread cut into small squares, and put these on the Spinach, or else some slices of hard-boiled egg." To make Extract of Spinach: "Comminute in a mortar one pound of Spinach, and when it is quite a paste, place it on a strong cloth, roll it up, and twist the opposite ends so as to wring the cloth, and Spinach, and express the juice; (for making it more easy to twist the cloth use two cooking spoons as levers,—one at each end.) Then place the extracted juice in a pan, and heat it until the chlorophyllin, and the albumin are coagulated; next drain off the water, and work it through a tammy." It was with a delicate offering of gammon (of pork), and Spinach, in his hands, Mr. Anthony Roley, of Nursery fame, went a-wooing, calamitous as to its result.

"Ranula furtivos statuebat quœrere amores;
Me miserum! tristi Rolius ore gemit:
Ranula furtivos statuebat quœrere amores,
Mater sive daret, sive negaret iter."

SPIRITS (*See* ALCOHOL).

THE several Spirits—Brandy, Gin, Rum, and Whisky,—(*which see*) are obtained by the fermentation of various saccharine substances, their alcohol, and other volatile bodies thus produced, being

separated by distillation. It is to the various bye-products which make their appearance during the fermenting process that the characteristic flavour of the different spirits is due. Thus the bye-products of the fermentation of malted barley give rise to the flavour of Whisky; those of molasses to the flavour of Rum; and those of the grape to that of Brandy. By means of patent stills these bye-products can be almost entirely separated from the alcohol with which they are mixed; and the result is a nearly pure form of spirit, the origin whereof can scarcely be discriminated; for which reason it is called "Silent Spirit." By suitable "flavouring the artful manufacturer can make this the basis of almost any spirituous drink"—(Dr. R. Hutchison). Amongst the substances commonly used for alcoholic fermentation in this country are malted, and unmalted barley, maize, rice, sugar, and molasses. The most valuable spirit for giving to sick persons, when really needed, is Brandy, provided it be genuine, which article is rare in this country. "The greater part of it," says Dr. Hutchison, "is spuriously concocted (actually in the Cognac district of France) from "silent spirit," whilst coloured with burnt sugar, and flavoured with œnanthine, or with various essences. But such a product is entirely different from genuine Brandy, since it is quite devoid of those volatile ethers derived from wine (in the true Brandy) to which the real Cognac owes most of the beneficial results it is capable of producing in sickness. Likewise the possession of these volatile ethers in large amount is that which mainly distinguishes Brandy from Whisky; as regards alcoholic strength the two are about equal." For Sloe Gin, as a noted astringent cordial of wide repute, a certain Mr. Nathanael Gubbins, at Chichester, used to possess a priceless prescription. Annually, on October 20th, a "Sloe" Fair (as thus interpreted) is held in that venerable city. Sloe jelly and Sloe puddings are much affected by the natives. But originally this October Fair was a "Slo" Fair (old English, *sloh*, to slaughter), when the beasts were sold for killing, that they might be salted down to provide meat through the winter.

STARCHES.

It has been taught until recently by all dietists that Starches as food elements exclusively supply bodily warmth, and fat; but

now the discovery equally of force-production from assimilated Starches, as, for instance, largely in white bread, or in potatoes, leads to a knowledge in signal advance of previous notions, whilst supported by modern experience. And therefore the conclusion is warranted that the bodily energies may be maintained in their full vigour by starchy vegetable nourishment quite as well as by the more stimulating, (and more expensive) animal foods. The conversion of Starches into available nutriment takes place mainly by their combination with saliva in the mouth; but this saliva does not act upon raw Starch, therefore it must be first made soluble by cookery; if through dry heat by becoming changed into soluble dextrin, which is a gummy substance familiar to everyone as the sticky material on the back of postage stamps. Similarly the crust of a loaf of bread consists chiefly of Starch which has been converted by the dry heat of the oven into soluble Starch, and dextrin. The carbohydrates of flour, or meal, are present mainly in the form of insoluble Starch, which must undergo conversion into soluble Starch, dextrin, maltose, and dextrose, before it can be assimilated as useful sustenance. This change is effected, or should be, chiefly by the saliva in the mouth, and is then continued in the stomach. The process of baking changes the Starch to a state of jelly, or mucilage, which in the crust is further baked brown, and hard. When we consider how large a part of our daily food consists of bread, and of vegetable Starches, the importance of our exceptional salivary power, and the necessity for keeping its secreting organs healthy, are at once evident; other products being also formed besides the soluble dextrin, *viz.*, maltose, and dextrose, which are fermentable sugars. Dextrin when it reaches the stomach becomes glucose, as likewise in the sweet- (stomach-) bread, leading on therefrom to the intestines. By contrast, cane sugar, when eaten, becomes sucrose in the stomach, and intestines. The glucose has to be stored in the liver; but if that organ is at fault the glucose is detained in the blood, and in other fluids of the body, causing diabetes. Otherwise the glucose serves for use throughout the body as required for supplying warmth, and vital energy.

Starch forms the greatest part of all farinaceous substances, particularly of wheat flour. But carnivorous animals living exclusively upon flesh are found also to acquire glycogen within

their bodies, which substance therefore cannot be altogether restricted to Starches as its source; and for this reason it becomes debatable whether diabetic patients are sugarless even on a restricted animal diet. Some of the patent foods, which are largely advertised as being predigested artificially, so that the Starch is already converted into nourishing substance without taxing the saliva, or the stomach-bread, are nevertheless severally deficient in fat, and still containing some unchanged Starch; (with the single exception, says Dr. Hutchison, of Mellin's Food for Infants, which is quite free from unconverted Starch). In the treatment of diabetes it is no longer considered wise, or necessary, to absolutely prohibit all Starches from the diet, else a worse condition supervenes, known as acetonuria, with a great risk of blood-poisoning, heavy unconsciousness, and death. It is true that proteids, and fat, will in a measure serve to take the place of the Starches, the latter being a compact source of energy; but these substitutes must put the liver to task, which is already inefficient as to its function of sugar conversion. Proteids are able to produce a certain moderate amount of sugar.

The best sources of fat are butter (quite fresh), bacon, pork, and fatty fish, (as eels, salmon, mackerel, herrings, sprats, sardines in oil), suet dripping, salad oil, yolk of eggs, and thick cream. In milder cases of diabetes some potatoes may be permitted (as explained here in "Potato," page 579), and may be made into a purée with butter, or cream. A given quantity of Potatoes, cooked in their jackets, by steam, and mashed, should readily take up half their weight of butter, or a quarter of their weight of thick cream. Fat may be likewise given in more severe cases with mashed greens, cooked in little, or no water except their own juices, or that of an added lettuce. Eggs, too, can be scrambled with plenty of butter; and clarified butter may be served with fish, or with asparagus, etc. It is worth remembering that the use of alcohol, if otherwise proper, at meals greatly aids the digestion of fat. Green vegetables may be freely allowed.

In the sixteenth and seventeenth centuries, the Starch used in laundries for stiffening ruffs, collars, etc., was frequently coloured yellow, this being at one time extremely fashionable; but blue Starch was affected by the Puritans. Addison, in the *Spectator* (305), talks of "a Professor who is to give a certain

society their 'stiffening,' and to infuse into their manners that beneficial political Starch which may qualify them for levees, conferences, visits, etc." Formerly, in this country, before tea and coffee were introduced, a restorative starchy drink known as Salep was prepared from the roots of the common male Orchis. It was held in high repute for recruiting the exhausted vitality of aged, and enfeebled persons; and it may still be prepared from a powder as supplied by the druggist, which is to be boiled in water with some spirit added. This differs from Saloop (page 565), also a former restorative drink, (made famous by Elia,) the ground-work of which was Sassafras wood.

STRAWBERRY. (*See* FRUITS).

ALL the former herbalists have agreed in pronouncing Strawberries (*Fragaria*) wholesome, and beneficial beyond every other English fruit; their smell is refreshing to the spirits; they abate fever, promote urine, and are gently laxative. So salubrious are Strawberries that if left by themselves to decompose they will decay without undergoing any acetous fermentation; nor can their kindly temperature be soured even by exposure to the acids of the stomach. They are constituted entirely of soluble matters, and leave no residuum to hinder digestion. It is probably for this reason, and because the fruit contains so little nutriment as a food, that the custom has arisen of combining clotted cream with it at table, whilst at the same time the sharp juices are thus agreeably modified.

"Mella que erunt epulis, et lacte fluentia fraga."

"Then sit on a cushion, and sew up a seam,
And thou shalt have Strawberries, Sugar, and Cream."

"They are eaten as a reare service, whereunto claret wine, cream, or milke is added, with sugar, as everyone liketh. They are good for perturbation of the spirits."—(*Terrestial Paradise*, 1629).

Horace Walpole, writing from Paris, in the autumn of 1775, said: "Madame du Deffand has been so ill that the day she was seized I thought she could not live till night. Her Herculean weakness, which could not resist Strawberries and cream after supper, has surmounted all the *ups*, and *downs* which followed her excess." Dr. Boteler is quoted in Walton's *Compleat Angler*

as having said: "Doubtless God Almighty could have made a better berry, but He never did."

Charles Lamb had a sincere admiration of Izaak Walton, and the *Compleat Angler*. In his simple little story of Rosamund Gray (who was brought up from early years in a plain manner by her blind old grandmother, Margaret Gray), he tells of her lovingly thus: "I know not whether the peculiar cast of her mind might not be traced in part to a tincture she had received in early life from *Walton*, and Wither, from John Bunyan, and her Bible. The old-fashioned pictures in *Wither's Emblems* (an ancient book, and quaint) were among the first exciters of the infant Rosamund's curiosity. But in my catalogue of the small library at the cottage, I forgot to mention a Book of Common Prayer. Old ladies of Margaret's stamp (God bless them!) may as well be without their spectacles, or their elbow-chair, as their Prayer Book. I love them for it! Their Bible might never be suffered to lie about like other books, but was kept constantly wrapt up in a handsome case of green velvet, with gold tassels, as the only relic of departed grandeur they had brought with them to the cottage."

Strawberries were noted of old as "a surprising remedy for the jaundice of children, and particularly helping the liver of pot companions, wetters, and drammers." "Some also do use thereof to make a water for hot inflammations in the eyes, and to take away any film that beginneth to grow over them."

The chemical constituents of the Strawberry are a peculiar volatile aroma, sugar, mucilage, pectin, citric, and malic acids in equal parts, woody fibre, and water. The fruit is mucilaginous, somewhat tart, and saccharine. It stimulates perspiration, and imparts a violet scent to the urine; when purposely fermented it will yield an ardent spirit. If beaten into a pulp when ripe, and if water be poured thereupon, a capital cooling drink is made which is purifying, and somewhat laxative. The presence also of salicylic acid in Strawberries has now been definitely recognized, this acid being an acknowledged curative specific in acute rheumatism. The same acid is present likewise in several other fruits, to wit, grapes, apples, plums, cherries, and oranges, although its amount is less than one sixty-fourth part of a grain per two pounds of fruit. Nature is very gentle in her dosing,—more gentle by far than the clumsy mediciner, or food purveyor. Pliny made mention of the Strawberry as one

of the native Italian fruits. Linnæus declared he kept himself free from gout by eating plentifully of the same. Hoffman says he has known consumption much benefited by the same means. Strawberries are especially suitable in putrid fevers, as well as for catarrhal sore throat. From the juice, with lemon, sugar, and water, French herbalists concoct a very agreeable drink, "*Bavaroise à la Grecque.*" In Germany stewed Strawberries, and Strawberry jam, are taken at dinner with roasted meats, or with chicken; this jam promotes a free flow of urine. For making Strawberry jam the perfume of the Strawberry is so very fugitive that it will most certainly evaporate if the fruit is exposed to heat in an open vessel. The fresh pulp, when sugared, should be put into a wide-mouthed glass jar with a well-fitting stopper. When this jar is almost full, put the cork, or stopper, in firmly, and place it in a *bain marie*, with the water kept at the boil therein for a couple of hours; a gentle simmer is sufficient. After the water in the *bain marie* has become cool over a slackened fire take out the jars. It was the Count de la Place who introduced a very delicious way of preparing Strawberries, by steeping them in the juice of a sweet orange. Another *savant* improved on this by adding the outer yellow rind of orange peel rasped off by a piece of loaf sugar; and he affected to prove by means of a shred of parchment escaped from the flames which destroyed the Library of Alexandria that it was after this fashion the fruit was served in the banquets on Mount Ida.

"The noted Lady Ludlow" (told about by Mrs. Gaskell) "made the sense of smell a test of good breeding, particularly as to a faculty for discerning the odour of dying Strawberry leaves in the autumn. She prided herself upon this special power of scent, insomuch that to confess lack of ability for recognizing it was with her almost a confession of humble birth; but musk was never named in her presence, so great was her antipathy thereto; whilst bergamot, and southernwood were under the same ban; to gather, or wear either of which betrayed in her opinion a vulgar taste." There are certain persons, particularly those of a strumous bodily habit, with whom Strawberries disagree. The late Dr. Armstrong held a strong opinion that the tiny seed grains which lie sprinkled all over the outer surface of each pulpy fruit, are prone to excite intestinal irritation; he therefore advised his patients to suck their Strawberries through muslin, so as to prevent these diminutive seeds from being swallowed.

Sir Thomas Lauder Brunton inveighs in a similar fashion against such seeds. "We should not dream," he says, "of heedlessly placing on a delicate part of our skin a poultice of Cayenne, or pickles, or other biting substances; we should not sand-paper it several times a day quite unnecessarily; we should not wash it, if exquisitely tender, with strong vinegar; yet all these things we practically do to our hapless stomachs, which are far more sensitive than any external portion of our anatomy. Strawberry jam, for example, has a sand-papering effect inside us, nothing being less digestible than the seeds of this fruit; and for that matter all seeds are the same; such seeds, and pips, absolutely and positively refuse to be ground up, or to become dissolved in passing through the system." "What," asked Sydney Smith, when writing to Mrs. Baring (1834) from Weymouth Street, London, "What is real piety? What is true attachment to the Church? How are these fine feelings best evinced? The answer is plain,—by sending Strawberries to a clergyman."

The wild Woodland Strawberry (*Fragaria vesca*) is the progenitor of our large, juicy, delicious cultivated fruit. Its small berries are more acid than those of the garden plants, and their sharp juice is an excellent cleanser of the teeth, dissolving away any incrustations of tartar thereupon without injuring the enamel. A medicinal tincture is made from the berries of the Woodland Strawberry, which serves to relieve nettlerash, or erysipelas, being also of help for a suffocative swelling of the swallowing throat. Old Fuller styles these diminutive acid berries "toothsome to the palate if with Claret wine, or sweet cream; and so plentiful in the County of Devon that a traveller may gather them sitting on horseback in their hollow highways; they delight to grow on the north side of a bank, and are great coolers."

> "Ipsa tuis maribus sylvestri nata sub umbrâ
> Mollia fraga leges." (Says *Ovid*).

It should be thoughtfully noted that the human mouth is a very active germ incubator by its conditions, which are highly favourable for bacterial growth, *viz.*, the temperature (about 98° Fahrenheit), with free access of air, and abundance of culture media in fragments of food, cast-off skin cells, saliva, exudations from the gums, and decayed dentine. Thus it is that very many

varieties of these organisms, both poisonous, and neutral, teem by myriads in the mouth; some thereof forming a source through which serious, and even fatal diseases occur. More than a hundred different species of such organisms have been isolated, and cultivated. Highly important, therefore, is it to keep the mouth (within its enclosure) pure, free from carious teeth, and suppurating gums, and disinfected as to its decomposing shreds, and fragments of food-matters. We are by no means certain that the use of artificial teeth by the old is an unmixed blessing. The fact is worthy of notice that almost all the old people who live to an advanced age in country villages, (and it is here the greatest age is reached,) rely on their toothless gums for sufficient mastication; and the absence of teeth in very old persons may possibly be an indication of the necessity to return then to the simple diet of childhood. Artificial teeth may do harm, too, by encouraging old folk to eat more food than is good for them, and of a kind unsuited to their years. Horace Walpole, writing from Strawberry Hill (July, 1871), says: "To-day the wind is again in the dolorous corner; for these four days I have been confined with pain, and swelling in my face. The apothecary says it is owing to the long drought; but as I should not eat grass were there ever such a plenty, and as my cows, though starving, have no swelled cheeks, I do not believe him. I humbly attribute my frequent disorders to my longevity, and to that Proteus, the gout, who is not the less himself for being *incog*."

SUGAR *and* SYRUPS.

THERE are several sorts of Sugar, all belonging chemically to carbohydrate constituents of food, and which include Cane Sugar, Grape Sugar (or Starch Sugar, which is glucose), Sugar of Milk (or lactose), and a Sugar found in the juice of asparagus (as well as in some of the muscular bodily tissues), which is "inosite." Fruit Sugar (fructose) is discovered, together with some Grape Sugar, in almost all sweet fruits. The same can be made chemically from Cane Sugar when fermented, or if boiled with acids, and the Cane Sugar is then said to be "inverted." This Fruit Sugar is more slow to ferment (with yeast) than is Cane Sugar; it is also called "*lævulose*," because having a left-hand rotary relation to polarized light under the microscope. On the contrary, Grape Sugar is "*dextrose*," because having a

right-hand rotary direction under similar conditions ; such Sugar being found especially in grapes. Fruit Sugar (lævulose) forms a thick syrup, which will dry under heat to a gummy, deliquescent mass. It is prepared in both powder, and a honeyed form, this latter being known as " Satrap " lævulose. If the same becomes firm by a cold temperature, its consistence like honey may be restored by placing its vessel in warm water. Then as such it can be spread on bread, and taken with tea, or coffee. Professor Worm-Muller, even after allowing large quantities of lævulose to diabetic patients, could find no trace of it in their urine. This kind of sugar, as fattening and highly nutrient, is further indicated for pulmonary consumption. It is, moreover, an excellent medium for promoting strength in the weakly and convalescent ; also for giving physical energy to young persons of athletic pursuits. A lævulose Chocolate is made for the last-named purpose.

The uses of Sugar generally for medicinal purposes are of modern date ; they have been proved in two directions. Sugar has considerable influence on the separation of the gastric juices : Dextrose (Grape Sugar) reduces the secretion of the gastric juice to one-tenth part within the first three hours, and binds the acids ; Fruit Sugar (lævulose), on the other hand, reduces the gastric juice only to one-half, and correspondingly affects the acids in only a minor degree. From the different actions of these two Sugars it becomes clear that in certain forms of disease of the stomach, in which it is important to reduce the acidity, as in ulcers of the stomach, then Grape Sugar (dextrose) is of great remedial value ; while, on the other hand, in normal digestive conditions, or even in states when the gastric juices are insufficiently generated, and produced, the partaking of such Sugar should be very moderate, or digestion will be retarded. It has been also proved that by too free a use of Cane Sugar the digestive fluids are clogged, and find a difficulty in reaching the intestines. For these reasons Fruit Sugar is of more value when saccharine carbohydrates are needed for maintaining the bodily energies, and for building up the bodily structures ; and inasmuch as it would seldom be possible to consume the quantity of fruit needed to supply the requisite quantity of Fruit Sugar for a cure, it may be taken as "lævulose," to be had from the manufacturing chemist (*Schering's Factory*). Fruit jams may be made therewith instead of with Cane Sugar ; which faculty would be quite an acquisition for persons with weak digestive

powers, and faulty gastric juices. The lævulose is a non-perishable syrup, freely soluble in hot water. Mothers may wisely give it made as a sweetmeat to their children instead of acid drops, and other lollipops.

In *A Vindication of Sugar*, dedicated to the Ladies (1715), "Nature," says the writer, "who has given you Ladies more accurate, and refined palates, has made you more competent judges of taste, as not being debauch'd by soure, and uncouth wines, or drams, or offensive smoak, or the more sordid juice of the Indian henbane, (which is tobacco,) or vitiated by salt, or soure pickles,—too much the delight of our coarser sex! For these reasons the great Evelyn chose a young damsel of virgin unprejudic'd palate to judge of his curious, and fav'rite liquor, Cyder." Being, moreover, of a pleasant wit, he further allows that "the fair sex who love their beauty, or are of fine proportions, must be a trifle cautious about Sugar, which may dispose them to be fatter than *they* may desire to become, who are afraid for their fine shapes; yet for this there is a compensation, as it gives them a very wholesome, and goodly countenance, and sweetens peevish, and cross humours." Dr. Weber has found that, with a proper diet, by the use of Fruit Sugar even patients suffering from pulmonary consumption, with extensive lung mischief, have recovered. By such means the presence of carbonic acid in the blood is increased, and the bacilli of tubercular disease perish because meeting with this excess of carbonic acid over the oxygen necessary for their maintenance. Other Sugars will aid in a like method of cure, such as Malt Sugar, and Sugar mixed with diastase (the ferment of malt). Grape Sugar, and the carbohydrates related to it, are highly injurious to diabetic patients, because the oxidation of Sugar is with these sufferers deficient in the system, and thereby they become extraordinarily susceptible to tubercular disease; but the Fruit Sugar possesses directly opposite physiological properties, though closely related in chemical constituents. As much fruit as possible is to be advised for diabetic patients, but in an easily digestible form as to the vegetable cellulose, (by boiling). Carbohydrates (which possess twice as much hydrogen as oxygen) comprise fructose, Fruit Sugar (lævulose), Cane Sugar (glucose), starch (soluble, as dextrin), and cellulose. Early oranges contain only from 2 to 3 per cent of carbohydrates altogether, of which Fruit Sugar (lævulose) is the chief; and even sweet oranges have not more

than from 5 to 7 per cent of the same, so that in most cases they may be allowed. Other fruits poor in carbohydrates are strawberries, gooseberries, apricots, and melons. Modern medical scientists doubt the necessity, or propriety, of excluding all starches, and forms of Sugar from the diet of diabetic patients. An exclusively animal diet produces what are chemically called *acetones* in the patient's urine, these being dangerously liable to absorption into the blood, and (as diacetones) to action as narcotics on the brain. Mr. Ireland, a Canadian gentleman, suffered incessantly for twenty-five years from diabetic troubles, and difficult digestion. Taking his case into his own hands, as regarding starches, and starchy foods, he discovered that if the starch of cereals was *partially* predigested he could eat such foods without subsequent discomfort, or injury. "I assert," he writes, "without fear of refutation, that starch-changed cereals are far superior to gluten in all cases where that article is considered necessary. I claim to change the starch to that stage which is almost identical with the same when effected by the ptyalin of healthy saliva." There is plenty of evidence that cataract in the eyes may be produced in animals when Sugar is taken by them to excess, even though their general health does not suffer therefrom. Experiments have proved that cataracts were caused in trout by sugaring the water in which they lived; and similarly in frogs with the same result. It has been justly inferred from these experiments that the progress of a cataract in the human eye can be retarded by restricting the use of Sugar in the food, and drinks. In advanced diabetes, when an excess of Sugar is detained in the blood, cataract is commonly induced, and the sight becomes thereby obstructed. *Per contra*, is it not admissible to suppose that in cases of spontaneous cataract when Sugar has been taken only sparingly, as a habit, with what was eaten, and drunk, the sagacious administration of Sugar as a medicine systematically pursued may be helpful? It is remarkable that persons affected with diabetes have a subtle characteristic odour: Sir Lauder Brunton has instanced a doctor who can diagnose the disease by their scent. The said doctor strolls down among the crowd of out-patients at a large hospital, and will select six diabetics by their smell. It is an allowed fact that antiseptics, such as boric acid, and the like, if given in limited quantities, help to correct the excessive output of Sugar in diabetes mellitus.

Eichorst pronounces that the great secret of treating this diabetes successfully lies in the dietary, and chiefly as regards a plentiful supply of fats, whereof the physician should be able to suggest a large variety of forms in palatable dishes. The diabetic patient who passes 400 grains of Sugar in his urine daily will have to take 400 grains of albumin, or 180 grains of fat, to compensate for the loss. A New Zealand physician lately induced a patient suffering from advanced diabetes to nevertheless eat bread, and honey, (starch, and dextrose, in concentrated forms) at his morning and evening meals, throughout a week, doing this just to prove how mistaken the old notions about Sugar in the diet have been. The said patient (now steadily recovering) did not find any alteration in his urine as to its specific gravity, quantity, amount of sugar, or other morbid characteristics, from taking the week's bread, and honey.

Saccharin (benzoic sulphamide), which is often prescribed as a substitute for sugar to sweeten foods, and drinks, is a product of coal-tar, and does not possess any nutritive properties whatever, but rather the reverse, as it tends to paralyse the digestive energies. So likewise do other coal-tar products taken for a like purpose, as dulcin, saxin, and sucramin, though they contribute to the taste all the sweetness of sugar. Furthermore, Saccharin, when thus used instead of Sugar, is found to reappear in the saliva, giving it a mawkish sweet savour, and impairing the appetite. Dulcin has been given to a dog at the rate of one gram (fifteen grains) a day, and the animal died after three weeks of this practice.

It is the tendency of all the several Sugars to undergo fermentation in the stomach, according to three varieties: alcoholic (leading to the formation of acetic acid, or sour vinegar); butyric (with formation of butyric acid, such as follows often on taking hot melted butter); and lactic (the product being lactic acid, an element of rheumatic gout); in which latter case Grape Sugar (dextrose) should be avoided, whilst Cane Sugar, Maltose, and Sugar of Milk may be used in moderation. When butyric fermentation is disposed to occur, then Sugar of Milk is to be preferred for sweetening the food, and beverages; likewise when there is a tendency to sour alcoholic fermentation, with vinegar produced in the stomach. If Sugar is taken with other foods by a person in fair health, and is distributed uniformly over the day, considerable quantities can

be allowed, and properly assimilated, without any subsequent discomfort. As a general rule one may assume that a quarter of a pound can be taken daily without any bad results at all; but the precise amount must depend mainly upon the muscular activity of the individual subject, for it is as a muscle-food that Sugar is of especial importance. Whilst a muscle is in active use, and a flow of blood is stimulated thereto by vigorous exercise, the Sugar in such blood is used up far more rapidly than when the muscle is at rest. On this principle depends the fact that in a person of active daily habits, if Sugar is taken early in the evening, it is capable of decreasing the fall of muscular power which ensues at that time, and of increasing the power of resistance to fatigue. Glycogen, or concentrated Sugar, stored in the liver from the blood, and transmitted therefrom to the different muscles of the body, becomes used up when these muscles are set to work, and it accumulates in them again when they resume an attitude of repose. Hence arises, as already explained, the constant love of active schoolboys for sweets, which is altogether a commendable instinct. Oribasius wrote (A.D. 370): "*Puer nuper in lucem editus melle primum nutriatur!*" Can this be the authority for a custom still followed by so many old nurses, of thrusting a piece of butter with Sugar into the mouth of a newly-born infant?

Most remarkably, the flesh-eating animals who do not consume any starches, or carbohydrates in their natural food, nevertheless exhibit Sugar in their muscular structures; and this they must engender from the peptones of their flesh nutriment. It is, however, the omnivorous pig which produces by far the largest amount of Sugar, and on a lean, watery diet.

To the Greeks and Romans of old, Sugar was only vaguely known: it seems to have been introduced into Europe during the times of the Crusaders. The Sugar Cane was grown in Cyprus about the middle of the twelfth century, from whence it was transplanted some time later into Madeira; and about the beginning of the sixteenth century it was carried from that island into the New World. Raw brown Sugar is *Muscovado*; when clarified it is loaf Sugar, or lump Sugar. In the United States of America considerable quantities of Sugar are obtained from the sap of the Sugar Maple (*Acer saccharinum*). And, as Mr. Knickerbocker tells, "Among the first Dutch settlers a large lump of this Sugar was always suspended by a string over the

kitchen table; then each person would sip his tea, chocolate, or coffee, and bite a bit off the dependent Sugar-lump which they swung from one to the other. The Sugar of acorns is *Quercite*. Barbery Sugar is the finest quality, it being formerly thought to come from Barbary, before the West Indian trade was fully established. Cane Sugar is an antiseptic; if heated sufficiently with water, or a dilute mineral acid, it breaks up into equal parts of dextrose, and lævulose. A certain Sugar-mite (acarid) infests some of the unrefined commercial Sugars, and is said to be the cause of *grocers' itch*. Saccharose, or Cane Sugar, is chemically a solid crystalline body, soluble in water, but less so in alcohol; it does not directly undergo when in solution either lactic, or alcoholic fermentation, but in the presence of certain ferments it is resolved (as already said) into dextrose, and lævulose, each of which is readily fermentable, and apt to provoke gout. But that this infirmity will sometimes arise spontaneously, without being personally incurred, or immediately inherited, seems to be certain. An instance in point is that of the noted Horace Walpole, with whom, as he relates, "gout began before he had reached his fortieth year." His chief reason for objecting to this aldermanic distemper was that he could show no title to it. "If either my father, or my mother had suffered from it, I should not dislike it so much; but it is an absolute upstart with me, and, what is more provoking, I had trusted to my great abstinence for keeping me from it. If I had any gentleman-like virtue, as patriotism, or loyalty, I must have got something by them. I had nothing but that beggarly virtue—temperance,—and she had not interest enough to keep me from a fit of the gout." Again, after rallying from an attack in December, 1784, he said: "My recoveries surprise me more than my fits; but I am quite persuaded now that I know exactly how I shall end; as I am a statue of chalk, I shall crumble to powder, and then my inside will be blown away from my terrace, and hoary-headed Margaret will tell the people who come to see my house, 'One morn we missed him from the 'customed hill.'"

From the scarcity of Sugar on the Continent which was caused by Napoleon's system during the Peninsular War, came the discovery of its manufacture from beetroot, also the practice of adding chicory to coffee. It seems certain that the Romans were not acquainted with Sugar as an article of common, or daily use,

nor as a crystallizable substance, though they had perhaps noticed a sweet extractive part in certain reeds. Lucian says :—

"Quique bibunt tenerâ dulces ab arundine succos."

When Sugar was first introduced into England is a matter of uncertainty. It was evidently scarce, and doubtless dear, when in 1226 "Henry the Third asked the Mayor of Winchester to procure for him three pounds of Alexandria Sugar, 'if so much could be got;' also some rose-, and violet-coloured Sugar." The *Pharmacopœia* of the London Colleges first claimed Sugar for medicinal uses, and therein it must have played an important part, judging by the well-known proverb that a person standing in need of some essential possession which he lacks is "like an apothecary without Sugar." But because of its coming in as a medicament it was received with disfavour by some, who pronounced it to be heating ; others declared it assails the lungs; and, again, others that it predisposes to apoplexy. But calumny has been compelled to recede before truth, and half a century ago it became told in a memorable apothegm that "Sugar does no harm except to the purse." Its present use gets daily more and more general ; and now there is no alimentary substance which has undergone more processes of admixture, and transformation. The fact has become firmly established by experiments in the German Army, that a Sugar diet not only supplies men with greater energy than albuminous foods convey, but does this much more rapidly (which is very important when troops are on active service); so that in order to keep up a due effect the Sugar must be eaten frequently when on the march, which is not difficult to do, seeing the multiform preparations of portable Sugar. When Mr. Montagu Holbein practically succeeded in swimming across the English Channel from Dover to Calais (September, 1903) his food throughout the transit consisted chiefly of prepared milk, eggs, and brown Sugar sandwiches; which last he had always found very sustaining, either in long-distance cycling, such as when he made his twenty-four hours' record, or in his prolonged swims.

For preserving meat, as in making hams, Sugar is a better material to use than salt, seeing that it withdraws less of the nutritive constituents into the brine, and forms a crust round the meat which helps to keep in the juices ; only, before the ham (when treated thus) is used for cooking, it must first be

immersed for some short while in water. Syrups made with simple lumps of Sugar, and water, have proved efficient to dispel a severe headache occurring from want of food, or hunger; and experiments have therefore been tried with a view to ascertain the value of lump Sugar as a luncheon, when other nourishment cannot be immediately had. It would be an easy matter to carry half-a-dozen pieces of such lump Sugar in one's pocket, so as to be masticated with no other accompaniment than a small draught of water; preventing, or at any rate postponing, by such means the fulness of blood, passively turgid within the head, which would otherwise ensue. For a sweetmeat of Sugar with butter, Toffee, or Taffy, is of value as a concentrated form of carbohydrates, attractive to children, and essentially well adapted for giving increase of fat, as well as for furnishing bodily warmth. It has the advantage that much of its Sugar is in the easily-digested "invert" condition. For young children who dislike the fat of meat, and cannot take cod-liver oil, this Toffee is an admirable substitute; if given only at the end of meals it is not likely to disagree. Sir Walter Scott (in *The Abbot*) speaks of "the lump of Sugar which pothicaries put into their wholesome, but bitter medicaments to please a froward child." A capital sweetmeat "rock," is to be made with onecupful of brown sugar, three-quarters of a cupful of water, and a quarter teaspoonful of cream of tartar. Boil slowly, without stirring, until the whole is of an amber colour. Split and toast some Turkey figs; lay them in a buttered tin dish, pour the candy over them, and cool off gradually. This is excellent against a costive habit. For compounding "Eau Sucrée," to be taken against nervous headache: "Use of boiling water, one pint; orange-flower water, one tablespoonful; lump Sugar, one ounce. Put the sugar in a jug, pour over it the boiling water; stir well until the Sugar is dissolved; when cold add the orange-flower water." Syrup of Lemons mixed with water makes a delicious drink for fevered patients, or in hot weather. "Squeeze the juice of five lemons into one and a half pounds of loaf Sugar; dissolve these together in an earthen jar placed in a saucepan of boiling water; simmer in this way until the Sugar is melted into a thick syrup; bottle it when cold, and cork well. The lemon-juice should be strained before it is blended with the Sugar." Mr. Banting, when adopting a systematic regimen to reduce his

bulk, found Sugar to be the most fattening of all foods; five ounces of it in a week caused his weight to rise one pound. He called milk, "Sugar"; butter, and beer, "human beans," because these matters of diet have the same effect on the human subject which beans exercise in the case of the horse; and he regarded such items as constituting the most insidious dietary which an elderly man with the tendency to become fat can adopt (though it would be "eminently friendly to youth"). He adds: "I can conscientiously assert that I never lived so well as under my reformed plan of feeding." His obesity had been such as to render him unable to tie his own shoes, and to compel his going downstairs backwards. On a regimen of abstinence, chiefly from bread, milk, butter, Sugar, and potatoes, he lost thirty-five pounds of weight in thirty-eight weeks. In 1598 Hentzer, a German traveller, described Queen Elizabeth of England, then sixty-five years of age, in the following terms: "Her nose is a little hooked, her lips narrow, and her teeth black,—a defect the English seem subject to from their great use of Sugar." Most probably, if Sugar really impairs the teeth, it does so indirectly by lingering in the crevices of the mouth, and leading to the production of acids which are destructive to the enamel.

In clarifying Sugar the first boiling proceeds to the thread degree only; the second boiling to the small pearl degree; the third to the great pearl degree, (when the bubbles forming on the surface of the boiling liquor lie close together like round pearls); the fourth, and fifth, to degrees of "cracking"; and in the sixth, boiling caramel is produced, with the Sugar slightly burnt, and of a dark-brown colour.

Sydney Smith, when writing to Lady Holland (1807), from Bath, informed her that "a dreadful controversy has broken out in this city as to whether tea is more effectually sweetened by lump, or by powdered Sugar, and the worst passions of the human mind are called into action by the pulverists, and the lumpists. I have been pressed by ladies of both sides to speak in favour of their respective theories, at the Royal Institution, which I have promised to do." Quite recently, however, a much more important issue concerning Sugar is engaging the attention of scientists at that Institution. The discovery has been lately made that this substance can be chemically produced by passing an electric current through water impregnated with carbonic acid gas; this ready manipulation promising to bring about

one of the greatest revolutions in the history of the world, *viz.*, converting simple substances into complex food-stuffs, such as we have hitherto had to provide from far countries at considerable cost.

Elia relates in his delightful Essay, *My First Play*, concerning his wonderment at the decorations of Drury Lane Theatre, particularly the crystal pilasters, "reaching down from the boxes to the pit, how they were adorned with a glittering substance (I know not what) under glass, as it seemed, resembling a homely fancy, but I judged it to be *Sugar Candy*; yet to my raised imagination, divested of its homelier qualities it appeared a glorified Candy."

Treacle is the spume of Sugar in the refineries, and is so called because resembling, either in appearance, or in its supposed medicinal properties, the ancient theriacal compounds. Theriac was of old a reputed classic antidote against venomous bites from wild beasts, serpents, etc. Evelyn records in his *Diary* (1646) after this fashion: "Having packed up my purchases of books, pictures, casts, and *Treacle* (the making, and extraordinary ceremony whereof I had been curious to observe), I departed for Venice." Formerly the Triacle, or Treacle, was believed to be capable of curing, or preventing, the effects of poisons. Our modern Treacle is of three kinds: Black, thick Treacle, with a flavour of burnt sugar, (which Treacle can be procured only at oil-shops); Golden Syrup (which is purer, sweeter, thinner, and lighter); and the plain, old-fashioned Treacle, which is of a reddish-brown colour, without tasting of caramel. Golden Syrup is the uncrystallizable liquid finally separated from crystallized Sugar in the refining process, either by the draining of Sugar in loaves, or as forcibly thrown off by the revolving centrifugal apparatus when preparing moist Sugar. This Golden Syrup should be made from pure Sugar alone, and from nothing else; it has sometimes a tendency to crystallize, and to become clouded, but not thereby undergoing any deterioration in quality, or flavour; indeed, the Syrup is rather improved by this slight turbidity; but the public will have none of it; and hence it comes about that glucose is added, which for a time checks the tendency to crystallize, and serves to keep the Syrup transparent; 70 per cent of glucose will answer this purpose. Provided the glucose, which may be added to Golden Syrup, is pure, there is nothing deleterious in this;

but much of what is imported as glucose is loaded with sulphites, and at the best such is not Cane Sugar, any more than the best manufactured margarine is dairy butter. The moral lesson to housewives is, "never to refuse a good Golden Syrup on the ground of its being clouded." When quite clear it lies also under the imputation of containing a minute quantity of arsenic. In the Western parts of England is made a concoction which goes by the name of "Treacle-George." "Take a wide, shallow tin, a layer of short crust, a layer of plain Treacle, a layer of bread-crumb, and a sprinkling over of lemon-juice, repeating the series until the tin is filled; cover the top with paste, and bake in a quick oven." Molasses is the draining of crude Sugar, in distinction from the *Treacle* of refined Sugar; but the name Treacle is frequently given by misapprehension to molasses. The Government of Queensland, Australia, has lately announced two cures of alleged cancer by molasses. One was a cancer of the tongue, nearly choking the sufferer. He accidentally discovered that molasses eased his distress, and after his taking a teaspoonful five times a day the cancerous growth gradually disappeared. The other case was declared to be cancer of the stomach, and was cured by a similar mode of treatment pursued for three months. Again, by increasing the intestinal secretions Treacle is of frequent service for obviating constipation. Furthermore, it is very nourishing for young children towards making fat, and supplying bodily warmth. "Once on a time" (*see Alice in Wonderland*) "there were three little sisters, Elsie, Lacie, and Tillie, who lived at the bottom of a well; they lived there because it was a Treacle well; and these three little sisters were learning to draw, you know. 'What did they draw?' asked Alice. 'Treacle,' said the Dormouse. 'Where did they draw the Treacle from?' asked Alice. 'Why, you can draw water out of a water-well,' said the Hatter, 'so I should think you could draw Treacle out of a Treacle well! Eh? Stupid!' 'But they were *in* the well,' said Alice to the Dormouse. 'Of course they were,' said the Dormouse; '*well in.*'"

For "Treacle tarts": "Take a quarter of a pound of flour, two ounces of dripping, two tablespoonfuls of Treacle, and two table-spoonfuls of bread-crumbs; put the flour in a basin, with a pinch of salt, and rub the dripping lightly in; add sufficient water to make a stiff paste; roll it out on a floured board, and line a

greased tin, or plate, with the paste; mix the Treacle and bread-crumbs together, and pour out on the paste; cover with strips of the paste, and bake for half an hour." When Alice, at the end of *The Looking Glass*, was made Queen at last by general consent, a shrill voice was heard singing from the Castle, and hundreds of other voices joined in the chorus:—

"Then fill up the glasses as quick as you can,
And sprinkle the tables with buttons, and bran;
Put cats in the coffee, and mice in the tea,
And welcome Queen Alice with thirty times three!

Then fill up the glasses with treacle, and ink,
Or anything else that is pleasant to drink;
Mix sand with the cider, and wool with the wine,
And welcome Queen Alice with ninety times nine!"

The good old-fashioned "Treacle posset," taken hot at bedtime, when a catarrhal cold begins, has been told of explicitly in *Kitchen Physic*. It promotes free perspiration, whilst the lactic acid of the curdled milk induces sleep; furthermore, the Treacle acts as a gentle laxative. A posset is so named from the Welsh "*posel*," curdled milk. Sometimes cider is used instead of wine for making the steaming draught.

SWEETBREADS.

The throat gland (*Thymus*) of the calf is the true Sweetbread; but what is known anatomically as the Pancreas, or Stomach-bread, passes likewise commonly under the name of Sweetbread as supplied by the butcher. Each of these is good for invalids as a light food, easily digested, as long as the animal killed to supply them has still lived on milk, but they change their character when the calf begins to eat grass, and hay. It is the Pancreas, or Stomach-bread, which has a function to digest starches, and fats, after they leave the stomach, and when they first reach the intestines. This Pancreas secretes a fermenting principle which may be collected from the animal, and procured through the chemist as Pancreatin, for mingling with sugar of milk, or with cane sugar, so as to digest either starches or fats outside the body; also it may be mixed with preparations of alcohol (rum, cognac, or wine), and drunk as a nutritive, stimulating beverage; but these admixtures are insidious as to their intoxicating effects, because their absorption is rapid, so that

small quantities will inebriate, the taste of the alcohol becoming concealed. Both the throat Sweetbread, and the stomach Sweetbread, of the calf, are cellular organs held together by loose connective tissue, so that when taken as delicate foods they are easily dissolved in the stomach. Nine ounces of the true Sweetbread are completely disposed of by a healthy stomach in two and a half hours, while a similar weight of beef-steak demands at least four and a half hours for its complete digestion. But the cells of these Sweetbreads are chiefly composed of nucleo-proteid, for which reason (as explained concerning kidney foods, and liver) they are likely to disagree with gouty persons.

It seems proved that the Stomach-bread (Pancreas) has to do with the occurrence of diabetic disease. If the organ is extirpated from a living dog, severe diabetes is brought about. For this reason, on the modern principle of treating with a curative aim the diseased condition, or perverted function of a human glandular organ by giving portions of the corresponding glandular organ taken freshly from a recently slaughtered, sound animal, (or extracts made therefrom by the chemist), it may be found highly useful to administer the Stomach-bread, or portions thereof, cooked or uncooked, from time to time to the diabetic patient, carefully watching the effects produced.

The Stomach-bread of the sheep may be likewise experimentally employed in the same manner. The juice secreted thereby, as well as by the Stomach-bread of the calf, closely resembles our saliva, and contains a similar ferment, which can convert starch into dextrin, and dextrin into sugar (glucose), more powerfully indeed, and more completely than the saliva serves to do. "Pancreatin" is the concentrated juice of the Stomach-bread procured from animals, and prepared by the chemist for emulsifying fatty foods, and starches, before they are taken as food, thus saving the Stomach-bread from work to which in the dyspeptic person it is unequal. For making this the animal Pancreas (Stomach-bread) is rubbed down with glycerin, so that its solvent principle, "trypsin," may be actively retained. The Pancreatin does its work best when in neutral, or alkaline solutions. Within the human system the Stomach-bread is chiefly stimulated by the acid gastric juice which reaches it from the stomach. Formerly a "Sweetbread" signified also in England a bribe, or douceur. "I obtained that from

the fellow with a few Sweetbreads which I gave him out of my purse." In Jane Austen's Novel (*Emma*) the amiable, pottering, old valetudinarian, Mr. Woodhouse, is given to propound views of rigid strictness concerning matters of the table, which views have a somewhat humorous vein; they rise, however, almost to a tragedy when poor Mrs. Bates is deprived thereby of her Sweetbread at supper, just because the accompanying asparagus is decided by him to be imperfectly cooked. "The baked apples, and biscuits" (which came after) "were excellent in their way, you know; but there was a delicate fricassée of Sweetbread, and some asparagus, brought up at first, and good Mr. Woodhouse (fastidious, and a fidget), not thinking the asparagus quite boiled enough, sent it all out again. Now there is nothing grandmamma likes better than Sweetbread and asparagus, so she was rather disappointed; but we agreed we would not speak of it to anybody for fear of its getting round to dear Miss Woodhouse."

TAMARINDS.

The "Tamar Hindee," Indian date, comes to us only as a sweet, sub-acid, juicy fruit-pulp intermixed with fibrous strings, and containing smooth, glistening, hard, auburn-coloured stones. This pulp fulfils medicinal purposes which entitle it to high esteem as a Simple for use in the sick-room. Large quantities of the luscious date are brought to our shores from the Levant, and Persia, but before importation the shell of the pod is removed. The pulp possesses by nature traces of gold in its composition; but if exhibiting any presence of copper on a clean steel knife-blade held within the conserve for a short time, then an adulteration is signified. The occult influence of the metals upon the human economy, whether when taken infinitesimally as medicines, or when applied externally to the body, or limbs, is not sufficiently realized as yet, though our forefathers had an inkling of the matter which amounted to more than mere superstition. Old philosophers spent much labour in trying to find the *aurum potabile* as the elixir of life. Again, a former ceremony conducted annually on Good Friday at Westminster shows the like belief, it being the "blessing of cramp rings," which was carried out by the King himself. He went into his private Chapel on that day, accompanied only by his grand

Almoner, and then crawling on his knees to the Crucifix, he there blessed a bowlful of gold and silver rings. These rings were afterwards distributed to persons afflicted with rheumatism, or epilepsy. The practice had its origin, it is said, in a certain miracle-working ring which was given by a saintly pilgrim to Edward the Confessor, and which was kept in Westminster Abbey. Of course the so-called hypnotic suggestion may have helped materially, together with metallic influences, in working whatever cures resulted from this pious proceeding. Half a century ago it was thought of service to apply metallic plates remedially to the soles of the feet, and to carry metallic balls about the person; gold was to increase the vitality, silver to clear the brain, and sulphur to cure rheumatism. Even now it is authoritatively advised that cramp may be prevented at night by holding a small stick of sulphur in each hand when in bed, since the moisture of the palm will somewhat develop the latent electricity of the sulphur so as to give off sulphuretted hydrogen, which will be absorbed by the skin. Chemically Tamarind pulp contains citric, tartaric, and malic acids, in combination with potash; also gum, pectin, and starch. Boiled syrup has been poured over it beforehand. The fruit is sharply acid, and may be made by infusion in boiling water (and when allowed to become cool, and strained off) an excellent cooling drink.

The Arabians first taught the remedial uses of Tamarinds, which are anti-putrescent, and exert somewhat of a laxative action, being corrective of biliary torpor; but for these purposes an inconveniently large quantity must be taken, which would be apt to clog by its excess of sweetness. When acids are indicated to counteract septic fever, and to cool the blood, the Tamarind will be found exceptionally helpful; also, as slightly preventive of constipation a dessertspoonful, or more of the agreeable pulp may be had for a compote with lunch, or at dessert; this palatable pulp is put into curries because of its pleasant acid flavour. Gerarde tells that "travellers carry some thereof with them, mixing it with sugar, as a reserve food throughout the desert parts of Africa." The fruit of the Tamarind is undoubtedly of service against sluggishness of the liver, and by the virtue of its potash salts it will tend to heal a sore mouth as arising from fermenting acid humours in the blood. The natural traces of gold, minutely subdivided, in the Tamarind, are well calculated to make this fruit curative of secondary venereal disease. Tamarind

fish, prepared with the same acidulous fruit, is esteemed to be a relish in India. As an instance of empirical medicine, Dr. Pearse recorded the fact (in 1902) that "as long as forty years ago he observed a passionate craving on the part of native Indians for acid fruits, such as the Tamarind, lime, etc.; at which period medical usage in India very much debarred any supply of fruits to the natives; but nevertheless they were so importunate in soliciting these fruits, that their earnest petitions for lime-juice and Tamarinds could not be resisted. The instinct of the native overcame medical prejudice, and acid rations of fruits were ordered as essential in emigrant ships, hospitals, and jails. Similarly, too, the native had a supreme longing for onions, and for garlic in his curry. "Empiricism," adds Dr. Pearse, "the outcome of human experience, precedes, and indeed makes a part of true science. The strongly-expressed longings of a people for a special food should arouse, and enlist our earnest attention." For making Tamarind water as a fever drink: "Take two ounces of juicy Tamarinds, a quarter of a pound of stoned raisins, and three pints of water; put the Tamarinds, raisins, and water into a stewpan, and boil gently, for one hour; then strain, and use when cold."

TAPIOCA. (*See* SAGO; *and* PEPPER: *Cassareep*).

TARRAGON. (*See* HERBS).

TEA.

THE dietetic uses, and effects of Tea are fully discussed, and described in our *Kitchen Physic*, so that only a *résumé* of the statements, and particulars there expounded, will be now adduced as relevant to its medicinal utility. The chemical composition of the leaf consists of theine (a crystallizable salt), tannin, casein, gum, sugar, starch, fat, aromatic oil, vegetable fibre, mineral substances, and water. When taken in an infusion of boiling water, Tea has been long noted as one of the very best, and most reliable nervine restoratives. The theine and aromatic oil not only act as sedatives to the nervous system in general, but they also exert a conservative effect on the different bodily structures, checking any disposition to a wasteful change therein of too rapid a nature, and to undue physical exhaustion. Tea

contains potash, peroxide of iron, soda, and some other salts which are of essential importance to the human economy. "We have, therefore," says Liebig, "in Tea a beverage which comprises the active constituents of the most powerful mineral springs." (Theodore Hook playfully styled his effervescing Mineral Waters "*fizzick.*") When milk, and sugar are added to the infusion, it becomes a useful, and nutritious food; whilst an important physical effect is brought about on the skin, and mucous membranes. The production of active perspiration by drinking hot Tea is a familiar fact; and the relief to the oppressive sense of heat in summer weather by doing the same thing is well known; an increase is caused in the sensible, and insensible perspiration, rendering much of the heat near the skin surface latent by free evaporation, and thus powerfully cooling the skin. Tea depends for its main quality on the alkaloid *theine* which it furnishes, and for its fragrance, on the volatile oils in the leaves. There were two original varieties of the plant,—*Thea Chinensis*, and *Thea Assamica*; the latter is found to retard conversion of the food-starches into dextrin and sugar by the saliva, more powerfully than a good China Tea. The extended use in this country of Tea, Coffee, and Cocoa within the last two centuries has led to results (says Sir Wm. Roberts) which evidence manifestly proves are not injurious. A continued national progress, together with an increasing ascendency, serve to show that the addition of so important and peculiar a nutriment to our dietary, has improved our type of intellect by bettering the pabulum of the brain, and nervous system; indeed, it seems quite feasible to trace therefrom an upward, and onward change in the mental calibre, especially of the working classes, within the last three generations. There is to be observed an increased precision in mental operations, which has led to an improved criticism; also a rise, and progress of the exact sciences, and of the dependent industrial arts, more so perhaps within this brief epoch than in all the preceding ages of the world; whereas during the same epoch art and literature, which depend more upon the imagination, have practically stood still; the coincidence is at least suggestive!" Southey tells the story of his friend's great grandmother who made one of the party sitting down to the first portion of Tea that ever came to Penrith. "They boiled it in a kettle, and ate the leaves, with butter, and salt, wondering wherein the attraction lay."

Much has been asserted about the injurious effects on gastric digestion of the tannin contained so abundantly in many Teas. It has been alleged that meat-fibre is hardened by Tea, and that, *pari passu*, the coats of the stomach are liable to be similarly impaired; but such views are entirely theoretical. Leather is, no doubt, a very tough, indigestible substance; but meat-fibre is not gelatin like that which becomes tanned, and the coats of the living stomach are not dead membrane. As a fact, meat-fibre does not harden in Tea; on the contrary, it swells up nearly as freely in acidulated Tea of medium strength as in simple acidulated water. If it be wished to minimize the inhibitory action of Tea on the digestion of starches, instead of directing that the Tea should be infused for only two or three minutes, the plan should be to make it weak, and use it sparingly; also to drink it, not with the meal, but after the meal has been eaten. "And another device towards the same end, especially for persons of feeble digestive powers," says Sir Wm. Roberts, "is to introduce into the tea-pot with the Tea a pinch of bicarbonate of soda, which will completely obviate the deterrent effect of Tea on starch digestion; the mitigating effects on Tea of bicarbonate of soda, and of the commercial alkaline table-waters on wines, are well worth bearing in mind. Besides it is really a delusion to suppose that by infusing Tea for only a short time (two or three minutes) the passing of the tannin into the infusion can be avoided; you can no more have Tea without tannin than you can have wine without alcohol. This tannin, in the free state, is one of the most soluble substances known; if some hot water is poured on a little heap of tannin the substance instantly dissolves like so much pounded sugar." But Dr. R. Hutchison teaches somewhat differently about this matter. He says: "There is less tannic acid dissolved after an infusion of three minutes than after five, and less after five than after ten; but beyond that one does not find an increase, for by then practically the whole of the soluble matters have been extracted from the leaf. The theine is so soluble that it is practically all dissolved out of the leaf immediately infusion has begun."

In Oxfordshire a Company has been formed of late for making small tablets which shall chemically remove the tannin from Teas, particularly those of India, and Ceylon, (which furnish tannin largely, so that infusions thereof are exceptionally strong, and harmful.) It is said that one of these tablets, if dropped

into the teapot, will effectually counteract the injurious astringent principle, and thus confer the pleasure of Tea-drinking without any penalty attached thereto. The tablet is a combination of gelatine with alkaline salts; and, as gelatine is the chemical reagent of tannin, which it at once detects, and neutralizes, the use of this tablet justifies faith in its efficacy for making the drinking of Tea possible, and safe, to all digestions. The late Sir Andrew Clarke, who was a noted dietist, in some clinical remarks to his class of students, told them, with reference to Tea, (which he styled "a blessed beverage"), that "when of Indian growth it produces in some persons a kind of nervous disturbance which is very painful to witness. Tea," said he, "to be useful, should first of all be black China Tea; the Indian Tea which is being cultivated has become so powerful in its effects upon the nervous system that a cup of it taken in the early morning (as many persons do) so upsets the nervous centres as to actually induce a state of Tea-intoxication, which it is distressing to see. If you require Tea for your patients, or yourselves, which shall refresh without doing any harm, get black China Tea, putting in the right measure,—the old-fashioned teaspoonful for each person, and one for the blessed pot; then pour on boiling water, and within five minutes you must pour it off again, or it will become wicked instead of good."

In Italy, Greece, and some parts of the East, where Tea is comparatively unknown, and never used habitually, it is customary when anybody feels ill, with indefinite symptoms, to send for a dose of Tea from the druggist. Its action on persons who do not drink the infusion as a regular thing, appears to be specially potent in arresting early signs of fever, with headache, and general malaise. Count Romford, Founder of the Royal Institution, has told how to prepare the "burnt soup" which is the mainstay of the Bavarian woodcutters, and their ordinary breakfast, "infinitely preferable in all respects to that most pernicious wash, Tea, with which the lower classes of those persons who inhabit this island drench their stomachs, and ruin their constitutions." He adds: "When Tea is taken with a sufficient quantity of sugar, and of good cream, and with a large allowance of bread and butter, or with toast, and boiled eggs, and, above all, when it is not drunk too hot, it is certainly less unwholesome; but Tea, as the poor usually take it,—a simple infusion of this drug, drunk boiling hot,—is undoubtedly a

poison; which, though sometimes slow in its operation, yet never fails to produce fatal effects even on the strongest constitutions when the free use of it is continued for a considerable length of time." For making a good cup of Tea, the water should always be fresh boiled, and used as soon as possible afterwards; if the water has been boiling for some time, then the strength, and quality of the Tea will be impaired.

Of the Teas now consumed in this country, the greater part by far come from British India, and Ceylon; the demand for China Tea is proved to have been greatly reduced during the last two or three years. Six pounds of Tea per head are computed to serve our community, and of this quantity only one-third of a pound of China Tea is included for each consumer. In America, and Russia (both being Tea-drinking countries) only a little over one pound a head is used yearly, and in other European countries it is but a fraction of a pound per head. We therefore drink more than the United States, and all European countries put together. Besides taking fresh lemon with their Tea, the Russians have a fashion of mixing jam with it, half and half, (to say nothing of their taking beet soup served with thick, sour cream; or, again, roast duck with pickled cherries). In Spain, where Tea is made commonly for drinking, a leaf of the lemon verbena plant is placed in each cup, and the hot Tea is poured upon it. Some of the rustics in China add ginger and salt to their Tea. The French celebrity, Balzac, used to drink a Tea of unique quality, and fabulous value, which he reserved for special occasions, and special friends. This Tea had a history: it was gathered by young and beautiful virgins, chosen for the purpose, who had to pick the leaves before sunrise, and then to carry them, with singing, to the Chinese Emperor. Balzac received some of the same precious leaf through a well-known Russian Minister. There was a superstition attached to it that more than one cup of this almost sacred liquid was a desecration, and would cost the drinker the loss of his eyesight. One of Balzac's chief friends, Laurent Jan, never drank it without remarking apprehensively, "Once again I risk an eye, but it's worth it."

Of the Indian and Ceylon Tea, the young shoot at the top of the plant produces the finest Tea,—"flowery, and orange Pekoe," —from its juicy leaves; or, if these are still smaller, the "broken Pekoe." The Tea from the somewhat larger leaves next below is "Pekoe"; the next largest again below make "Souchong"; the

leaves still lower "Congou"; while a yet coarser leaf near the base of the shoot used to yield "Bohea," which has now almost entirely disappeared from commerce. In China the whole end of the young shoot goes to form Pekoe, while the leaves below that are Souchong. Pekoes, and Souchongs are unblended Teas. For black Tea the leaves are withered in the sun, and rolled until mashy, then made into balls, and allowed to ferment, so that the essential oils are produced, some bitterness is developed, and the tannin is partially oxidized, becoming less soluble to ome extent. For green Tea the fresh leaves are withered in hot pans at 160° Fahrenheit, then rolled, and withered again, next sweated in bags, and afterwards slowly roasted; thus the difference is that green Tea is fermented.

The character of the water in which Tea is infused is of the first importance; it should be well aerated, and have freshly come to the boil (not too hard), and the teapot first warmed, so that the boiling temperature may be maintained. The addition of milk, or cream, (though an outrage in the eyes of connoisseurs), is to be commended, because the albuminous matter of the milk tends to throw down some of the tannic acid of the Tea in an insoluble form. Sugar does not increase the wholesomeness of the beverage, but adds considerably to its nutritive value. All second brews should be avoided, because every useful constituent of the leaves has been already extracted. A Jesuit who came from China, instructed Sir Kenelm Digby, 1645, "that Tea when infused should not stand longer than you can sing the *Miserere* very leisurely; and then be poured on the sugar in the cups."

Dr. Haig, a modern authority on rheumatism, protests that the alkaloids of Tea, coffee, and cocoa prevent uric acid from being excreted, and thrown out of the body; insomuch that mischievous urates accumulate therefrom in the blood, giving rise to gout, and rheumatic attacks. But his conclusions formed thus are probably from a peculiar personal experience rather than of general applicability; at any rate, other observers have arrived at different conclusions from his. He finds (in his own case) that Tea (dry Ceylon), when drunk, furnishes as much as one hundred and seventy-five parts (in a thousand) of uric acid, or xanthin. More ruthlessly is it declared, in *The New Hygiene as a Drugless Treatment*, that "Tea is a rank poison, which fact is evident from experiments on animals; a strong

decoction of green Tea (or its extract) will speedily destroy life in the inferior animals." Fraser concluded, after careful and exhaustive experiments, that "both Tea and coffee tend to retard peptic digestion in the stomach, and intestines; but coffee seems to aid the digestion of eggs (the white), and ham, whilst Tea increases the generation of gases; and therefore coffee is to be preferred for flatulent subjects. Tea reduces the acid-absorbing power of foods, whilst cocoa increases it, and is therefore the more appropriate beverage for patients suffering from acid indigestion. Tea (particularly), and coffee are to be avoided as accompaniments to meat meals, which require much peptic digestion (in stomach, and intestines)." Tea-tasters insist that the moment the water in the kettle comes to the boil it shall be poured on the leaves; then the infusion is allowed to get cold in the several cups. Ceylon, and Indian Teas become syrupy when cold, and cloud over the surface of the liquid, just as though milk had been put in; but China Tea never clouds in this way. After standing for an hour or so, a ring forms on the inside of the cup where the top of the liquid touches; this is the tannin. It is never seen with China Teas, and rarely with Darjeeling Teas. Respecting Coffee, it is to be noted that the berries when green improve by age up to four years; after which time they deteriorate.

The value of cold Tea as a beverage is not sufficiently known. Literary men, and others accustomed to a sedentary occupation, commonly find that one or two cupfuls of cold Tea, made without adding milk, or sugar, will be as stimulating as the same quantity of sherry; whilst no fear is to be apprehended of subsequent drowsiness, and diminution for a time of the working power, as after imbibing wine, or spirit. Tea, and coffee, tend to cause wakefulness; alcohol, on the other hand, in the second stage of its effects, tends to lethargy, and the promotion of sleep. Old Tony Weller (in *Pickwick*) said respecting his wife, landlady of the "Marquis of Granby," and when recently deceased, as to her late use of Tea: "She took wery little of anything in that way latterly 'cept on the Temperance nights, ven they just laid a foundation of Tea to put the sperrits a top on." In *Alice in Wonderland* "the Mad Hatter urges in a trembling voice, to the King at the trial, 'I'm a poor man, your Majesty, and I hadn't begun my tea, not above a week, or so; and what with the bread and butter getting so thin, and the twinkling of

the Tea—' 'The twinkling of *what?*' said the King. 'It began with the Tea,' the Hatter replied. 'Of course twinkling begins with a T,' said the King sharply; 'do you take me for a dunce?' 'Go on!'"

Chocolate was the usual breakfast beverage in the early part of the eighteenth century; thus *The Tatler* tells that "the fops had their Chocolate in their dressing-gowns, served in their bedrooms, and green Tea two hours later." However, the simple family of John Wesley drank small beer at each meal. Swift, who suffered from deafness, and frequent severe vertigo connected therewith, writes that his physician forbade Bohea, allowing him to drink only green Tea, and coffee. About the middle of the same century Tea had become common among all classes. Hanway relates that "even beggars might be seen drinking their Tea. Country girls, when they sought situations in London, bargained that they must have Tea twice a day." Those persons who have read Boswell's *Life of Dr. Johnson* will remember what, to use his own words, "a hardened, and shameless Tea-drinker he was; rarely did he let his kettle get cool. 'Tea,' said he, 'amuses me in the evening, solaces my midnight, and welcomes me in the morning.'" Lady McLeod, a fashionable dame of the period, wrote in her *Diary* that "the learned Doctor frequently quaffed sixteen cups when he was spending the evening with her; and Mrs. Piozzi records it that she has sat up until four in the morning listening to the Doctor's clever, but stilted talk, and filling his cups for him. She once suggested his using a bowl instead of an ordinary cup, whereupon he desired to know what was her reason for doing this. 'Oh! to save yourself trouble, Doctor,' she replied, 'not me!' The Doctor remembered in his early days drinking Tea with Garrick, when Peg Woffington made it, and (so Garrick grumbled) made it 'as red as blood.'" "Tea," wrote De Quincey (1821), "though it is ridiculed by those who are naturally coarse in their nervous sensibilities, or are become so from wine-drinking, and are not susceptible of influence from so refined a stimulant, yet it will always be the favourite beverage of the intellectual; and for my part I would have joined Dr. Johnson in a *bellum internecinum* against Jonas Hanway, or any other impious person who should have presumed to disparage it." "Surely everyone is aware of the divine pleasures which attend a winter fireside; candles at four o'clock, warm hearthrugs, Tea, a fair Tea-maker, shutters

closed, curtains flowing in ample draperies on the floor, whilst the wind and the rain are raging audibly without."

The earliest known teapot (belonging to the Earl of Bristol) dates from 1697. At first the new beverage was drunk out of silver bowls, and afterwards from earthen cups, and then from China cups. Teapots were introduced from Holland. Probably the cups at first were smaller, and the infusion was not made so strong as at present. Hartley Coleridge, a great Tea-drinker, when asked how many cups he generally took, replied, "Cups, Madam! I don't reckon by cups! Pots, Madam, pots." Boswell makes mention of a teapot which belonged to Dr. Johnson, and held two quarts. Another teapot of his was purchased some years ago at Mrs. Piozzi's sale, at Streatham, and which was reputed to be the one he usually employed, holding more than three quarts; it was made of old Oriental porcelain, painted, and gilded. His consumption of Tea was prodigious, beyond all precedent; he professed to have drunk five-and-twenty cups at a sitting. China Tea cost sixteen shillings a pound at that time. Great ladies set the fashion of sipping it in dainty cups of the finest Oriental China. It was a common custom in the eighteenth century to put the spoon in the cup as an indication that no more Tea was then desired; turning up the cup in the saucer was another way of signifying that one had finished Tea. In an old volume of *Household Recipes* (1776) the writer speaks of Tea as a "tincture," and says too much milk must not dilute the "tincture"; he uses this term as though the drink were a medicinal draught, so as to conceal its true forbidding flavour. Austin Dobson wrote concerning a famous eighteenth century lady:—

> "She was renowned, traditions say,
> For sweet conserves, and curds, and whey,
> For finest Tea (she called it 'Tay'),
> And ratafia."

Formerly there was infused a beverage known as Breast Tea, or Pectoral Tea; it was composed of marsh mallow leaves, eight parts; coltsfoot leaves, four parts; Russian liquorice, three parts; anise, two parts; mullein, two parts; and orris, one part. A tea made with the dried petals of the wild violet (*Tricolor*), or common pansy, is invariably curative of the scald-head, or milk-crust of children if given weak, and in small quantities (from one to two tablespoonfuls) three times a day;

whilst also using some other portion of a stronger violet-tea for bathing the affected parts of the scalp externally. This wild violet contains a special medicinal principle, "violin." If preferred, the herb, whether fresh, or dried, may be boiled slowly in milk for two hours as a more nutritive tea; and a bread poultice made with the strong water infusion of violets applied over the scalp. The Dutch people often improve their Tea by collecting orange blossoms in the season, and keeping some of them with the Tea in the caddy. In the peasant speech of Devon, weak "Tay" is said to be "drefful wishee-washee stuff: 'tez water bewitched, and Tay begridged." Afternoon teas, which are now the order of the day all over England, had their origin at Belvoir, and were introduced there by the Duchess of Bedford. In France, Tea is held more as a medicament than a luxury; if the dinner just eaten seems to have at all disagreed, or to be remaining imperfectly digested, then the kindly host will offer the choice of a cup of Tea, or of chamomile infusion. "Virtuous Tea! thou addest not a blush to the cheek of beauty, not a tint to the nose of valour, not a wrinkle to the brow of age; generosity marks thy path; softness, and sweetness are in thy train."

The national beverage of the South American populations is Paraguay Tea, infused from the dried, and powdered leaves of the *Ilex Paraguaiensis*, this beverage being the sole stay and stimulant of the working classes there. It is best drunk as a very hot infusion through a metal tube, or "bombilla," without any admixture of milk, and sugar, though it is then bitter. Other persons, especially workmen, inbibe it as an infusion prepared with cold water, when it is known as *tereré*. Workmen carry this drink with them wherever they go, and from time to time have sips of it, therefrom acquiring always fresh energy. The percentage of theine, and of volatile oil in this leaf is very much less than that contained in the Tea leaf, or the coffee berry. Nevertheless, the invigorating, and sustaining powers, whilst differing from those conferred by Tea, and coffee, are found to be superior thereto. Moreover, a long-continued use of the *Yerba Maté*, or Paraguay Tea, does not entail any harmful effects. Its infusion is pronounced by Dr. Herbert Walker, of Uruguay, Surgeon to the Buenos Hospital, to be "one of the very best aperients existing." He has employed it in many cases of chronic constipation otherwise intractable, and has found it to

be "a sheet-anchor under such conditions, which he has never, so far, seen to fail in producing a normal evacuation of the bowels." Again, "In cases of bilious dyspepsia, and all the concomitant symptoms of headache, vomiting, lassitude, etc., Paraguayan Tea has simply worked wonders; besides increasing intestinal secretion, and energy of function, it has a decidedly powerful effect on the liver. For proper action it should be taken in the early morning on an empty stomach, and as hot as it can be well borne. About a dozen matés should be drunk, and followed by a glass of hot milk, on the top of which another dozen matés are to be consumed, the patient in the meantime taking walking exercise. This practice, if a lasting cure is desired, should be continued for two months, or more." Furthermore, the natives declare that thə Paraguay Tea, infused, and sucked up from a small pumpkin, or gourd, through a long reed, is an excellent remedy in fever, and for rheumatism.

The well-known, and highly-esteemed late Dean Stanley, of Westminster Abbey, had no vivid sense of taste, or smell. His cousin, Mr. Augustus Hare, has said that "oysters, and big buns were to the Dean what the most perfectly-devised dishes of a skilful chef would be to an epicure: they were the only edibles Dean Stanley could feel going down." Another eminent divine, of the same school, Professor Jowett, was similarly constituted; and it is said "the two were once breakfasting together, Tea being the beverage they both preferred, though why it is difficult to say. However, on this occasion they had been talking, and Tea-drinking freely, taking no less than eight cups apiece, when Jowett, during a pause, lifted the teapot to pour himself out another cupful, and then chanced to discover that all the while it had been forgotten to put any Tea in."

The "Funeral Tea" is a great feature of Yorkshire life. After a funeral the company, when the house of the chief mourners will not accommodate them, repair to a neighbouring refreshment room, and have a big tea, sometimes a knife and fork tea; anyhow, always with an abundance of cakes, and dainties included. John Wesley, who was strongly opposed to the Chinese leaf, recommended Sage tea as a substitute. In American revolutionary days, when Tea from the far East was boycotted, "Liberty tea" was brewed by the stalwart New Englanders from the four-leaved loose-strife, also from strawberry leaves, currant leaves, and ribwort; whilst "'Hyperion tea,'"

says Mrs. Earle, "was from raspberry leaves, very delicate, and most excellent." One of Mr. Ruskin's practical efforts in social economy was to establish in London a Tea-shop, for the sale of unbrewed Tea, such shop being an unpretentious place in Paddington Street. His object was to supply Tea to the poor at cost-price, and in any quantity from a quarter of an ounce upwards. Two old family servants were established in the shop to weigh, and sell the Tea. But the experiment was a complete failure; and, as Mr. Ruskin himself wrote, "the poor only like to buy their Tea where the place is brilliantly lighted, and elegantly ticketed." He debated whether he should erect a signboard, in "blue, and white" (Chinese), "black, and gold" (Japanese), or "rose, and green" (English).

"Te, veniente die, te, decedente, canebo:
Non tecum vivere possum: nec sine te."

A small child is said to have innocently asked her mother, who was teaching her good things, what God has for dinner. The mother answered seriously that God does not have dinner in Heaven, whereupon the little body said, with a bright smile, "Oh, then, I suppose He has an egg with His tea!"

THROAT GLAND OF SHEEP, THYROID. (*See* SHEEP).

THRUSH. (*See* BIRDS, SMALL).

THE flesh of the Song Thrush, or Throstle, is excellent for a weak digestion. "Roasted with myrtle berries it helps the dysentery, and other fluxes of the belly." Its notes, of flute-like melody, are "full of rich cadences, clear, and deep." The food of the Song Thrush is chiefly insects. "Around the head of spring," quoth Master Swan (*Speculum Mundi*, 1643), "the choristers of the resounding woods do then begin to tune their sugared throats, bidding good morrow to the day, and music to the morn." In former Roman times patrician ladies reared thousands of Thrushes yearly for the market, and further sold the manure therefrom for the land. Men ruined themselves in procuring dishes composed of these birds for their guests. But when the physician of Pompey prescribed a Thrush for inciting appetite, there was not one to be found for sale in all Rome; meantime Lucullus had scores of them in his private Aviary. The Thrush Aviary of Varro's aunt was one of the sights of Rome. Hannah

More has told respecting Dr. Johnson that when talking to her about Pembroke College, Oxford, and his poetical companions thereat,—Shenstone, and others,—he said, "We are all a nest of singing birds here."

For the particular aphthous, white, patchy soreness inside the mouth, which is known as "thrush," especially in infants (and in some extremities of adult disease),—this local trouble being produced by the yeast fungus (*Saccharomyces albicans*),—Swedish doctors give the "Thrush lichen" (*Pettigera aphthosa*) (which grows on moist Alpine rocks), boiled in milk, as a cure. Likewise, "*On fait avec le suc de Cassis*" (black currant) "*une confiture, et un Sirop que les Anglais emploient dans ces maux de gorge. Ils en fabriquent des saccharoles solides, sous forme de pastilles.*"

THYME (*See* HERBS).

TINNED FRUITS.

CANNED, or tinned fruits, suffer if allowed to remain at all in the tin after it has been opened; their acids act on the metal, and poisonous products are formed. The canned fruits have always been already cooked, for a time varying from five minutes even to some hours, so that but little further cooking is needed. To retain the natural flavour of Tomatoes (tinned) they should be parboiled quickly over a hot fire; if they are allowed to simmer long a bitter flavour becomes extracted from the seeds, and is imparted to the fruit. Asparagus is best cooked in the can before it is opened, by immersing this into boiling water for from twenty to thirty minutes; then open the can, and slide the contents carefully into a dish, taking care not to break the tender tips. With regard to tinned Lobsters, and Shrimps, owing to the large quantity of sulphur which they contain, there is a great likelihood of their turning black if their flesh comes in contact with the tin when they are packed dry; for which reason they should have been first put into parchment, or linen bags, or preserved in wood-lined cans. A story is told of an American officer, a man of good physique, who throughout several years of exacting service at an out-of-the-way western post subsisted entirely on "canned" goods. "It was his custom to pick up, and open a can at haphazard, one at each

meal; whether the contents were fish, fowl, vegetable, meat, or fruit, he ate that, and nothing more, and he still lives to tell the tale. But he was actively engaged all the time, both physically, and mentally, except when asleep; and he breathed fresh air in the open for the twenty-four hours of every day, and night." In New York, U.S., hundreds of millions of canned foods are consumed annually, but there has never been an authenticated case of poisoning by any one of the cans that could not be traced, and attributed to the carelessness of the consumer. At the present day no solder is used inside a tin, but the can is strictly a tin envelope with the contents *in vacuo*, as shown by the ends of each can being sucked inwards; if these ends are springy, or bulge outwards, then the vacuum does not exist, and the contents, being spoilt, must be thrown away. *The Epicure* (December, 1903) tells a true story of an old lady who had a pious horror of tinned foods. "Once she supped at a friend's house, partaking of an entrée which specially commended itself to her taste, insomuch that she resolved to ask for its recipe. But a fortnight elapsed before she could see her friend, and urge the request; then an explanation ensued;—the admired dainty was a tinned abomination! Incontinently the old lady went home, and took to her bed with a severe gastric attack, which shattered her strength, and more than ever confirmed her prejudices." Not improbably other such instances occur, where the imagination has more to answer for in illness from canned produce than the comestible itself.

TOBACCO.

In no sense can Tobacco be considered a medicinal food, yet as a most useful subsidiary agent it merits our passing notice in these pages. Detailed particulars regarding its qualities (good, and bad) are given at some length in *Kitchen Physic*. "Divine, rare, super-excellent Tobacco," wrote Burton (in his *Anatomy of Melancholy*, 1676), "is a virtuous herb when medicinally used; but as taken in smoke, hellish, devilish, and damned." "This herb goes far beyond all their panaceas, potable gold, and philosopher's stones; a sovereign remedy to all diseases; a good vomit, I confesse; a vertuous herb if it be well qualified, opportunely taken, and medicinally used; but as it is commonly abused by most men, which take it as

tinkers do ale, 'tis a plague, a mischief, a violent purger of goods, lands, and health, the ruine, and overthrow of body, and soul." In stories told about smokers C. S. Calverley has given it as his opinion, humorously conveyed :—

" How they who use fusees
All grow by slow degrees
Brainless as chimpanzees,
Meagre as lizards ;
Go mad, and beat their wives,
Plunge (after shocking lives)
Razors, and carving-knives
Into their gizzards."

Recent experiments have shown, concerning the antiseptic powers of Tobacco in smokers, that the microbes of some infectious diseases become destroyed (if inhaled) by the nicotine products which permeate the inside of the smoker's mouth, and fauces ; but that other microbes (notably those of diphtheria) resist the nicotine odours, and the Tobacco products, these microbes continuing to be virulent, and morbidly active. Thus those doctors who are habitual smokers, without excess, certainly acquire a measure of protection against several of the infectious diseases which they are called upon to encounter. But the evil effects of Tobacco are intensified in immoderate smokers who at the same time indulge in alcoholic drinks. The chief poisonous constituent of Tobacco-smoke is pyridin, and not nicotine, this pyridin being a poisonous base more readily dissolved by alcohol than by water. Pyridin bases can be readily traced in the mouth of an immoderate smoker, especially in a smoker of cigars. An alcoholic drink is therefore calculated to quickly wash out this poisonous oil, and to carry it into the stomach ; then absorption of the poison ensues, and definite toxic symptoms occur, which are due not so much to alcohol, or pyridin bases alone, as to the combined action of both unitedly in the manner now indicated. Smokers, therefore, should abstain from taking any form of alcohol at the same time as when making a free use of Tobacco. At a dinner given recently to Mr. Beerbohm Tree by the " Aborigines Club," New York, after the repast there was supplied, according to the *menu*, " a blackened drink of Savages, hotte, and with sweet flavoure ; also coyles of a most strange herbe, ye smoak of which smelleth wyth such a magikal, and grevous smelle ; ye menne doe be strucken wyth rare merryment, and laughter, smoakynge it,

and telle tayles, and synge songs wh' they telle not, nor synge not unto wyves, or bysshopes." In Shakespeare's day the leading tobacconists taught pupils how to smoke. During the year 1614 there were seven thousand Tobacco shops in, and near London alone. The fragrant weed was often adulterated with lees of sack, and oil, whilst kept moist by burying it in gravel when wrapped up in greasy leather. To learn how to blow out the smoke in balls, and rings, was indispensable to all men of fashion. Some pupils would brag of being able to take three whiffs, drink three cups of Canary, and then take horse so as to evolve the smoke, one whiff at Hounslow, the second at Staines, and the third at Bagshot. John Milton was a lover of choice Tobacco, smoking a pipe thereof at night after a frugal supper of bread, and olives, with a draught of pure spring-water; about which fare there clings a flavour of the happy days he had passed with a refined literary circle in Italy. It was the devout wish of Charles Lamb, "May my last breath be drawn through a pipe, and exhaled with a pun!" But actually, at the end, according to Edward Fitzgerald, in a letter to Pollock (May, 1842), "There was poor Charley Lamb, crazy, drunk, and making puns all his life, dying with a vision of roast turkey in his head."

"Coltsfoot" Tobacco is smoked by rustics in some English country places. This is a coarse powder formed from the leaves of the common Coltsfoot (*Tussilago farfara*). Smoking it will certainly relieve the difficult breathing of old bronchitis.

Likewise, the leaves of the Mullein, or Hedge-taper (*Verbascum thapsus*), are highly esteemed for smoking, particularly in Ireland, against the troublesome cough of consumptive disease, whilst the whole plant, boiled in milk, and strained, is given as a curative drink. This Mullein bears also the title "Bullocks' Lung-wort," because of its supposed remedial virtues in lung diseases of the said animal. The leaves contain mucilage, with a yellowish volatile oil, a fatty substance, and sugar, together with some colouring matter; they are large, and woolly. If smoked in an ordinary tobacco pipe, these dried leaves will completely control the hacking cough of consumption. Throughout most parts of Ireland, the Mullein is cultivated because of a steady demand for the herb by sufferers from this disease. Constantly, in the Irish newspapers, there are advertisements offering it for sale, and its leaves can be had from all the local

druggists. For administering in milk, with a similar object in view, the old Irish method is to put an ounce of the dried leaves, or a corresponding quantity of the same whilst fresh, into a pint of new milk, boiling it then for ten minutes, and afterwards straining. This medicament is given warm to the patient twice a day, with, or without sugar. The taste of the decoction is bland, mucilaginous, and cordial. The herb grows freely in England on dry banks, and waste places, having a thick stalk, from eighteen inches to four feet high, with large woolly leaves, and a long flower-spike, bearing yellow flowers, which are nearly sessile on the stem. Another common name of the plant is Hedge-taper, or formerly, Torch, because the stalks were dipped in suet, and burnt for giving light at funerals, and other gatherings. Again, other popular titles of the Mullein are "Adam's Flannel," "Jupiter's Staff," "Velvet Dock," "Cuddie's Lungs," and "Hare's beard" (in allusion to the dense, woolly hairs on both sides of the leaves). Mullein oil is a most valuable destroyer of disease germs, also of admirable service against some forms of deafness, by simply instilling a few drops into the affected ear twice a day.

The best known, and most potent poison to be smoked is Opium, which produces beautiful dreams at the onset, but leaves a severe headache, and thirst; its seductive effects become by repetition fearfully disastrous to mind, and body. Indians smoke wood-shavings saturated with a strong solution of pepper; also the leaves of the tomato, and the potato plants are pressed into their smoking service. In Jamaica the "ganjah" a kind of Indian hemp, is used for the same purpose. The Swedes smoke mountain Tobacco found growing in the Alps. The American Indians prepare dried holly leaves, willow bark, and sumach for their pipes. "Indian Tobacco," so called, is lobelia leaf, and is poisonous. The Bahamans adopt cascarilla bark, with unfortunate effect upon health, and mind; whilst the natives of Central America are inveterate users of Pimento (Allspice) Tobacco, which often causes cancer of the tongue. South African natives become curiously affected by smoking dried leaves of the Camphor plant, which presently bring on a state of trembling drivel, with causeless fright, weeping, and incoherent babbling. South Americans take resort to stramonium (thorn-apple) leaves, which lead on to convulsions, and death.

Tobacco, from which nearly 98 per cent of the nicotine is said to be extracted when in the raw state, has been recently introduced by Dr. R. Kissling; and he adds, "The cigars prepared in this way leave nothing to be desired as regards flavour, and aroma." If this be really the case much may be done towards revolutionizing the manufacture of safe, irreproachable Tobacco.

Tea cigarettes have been put into use by some persons of late in this country, being made with green tea (the unbroken leaf); which is rendered damp so that the leaves may become pliable for stuffing into the paper cylinders, but not wet enough to affect the paper. The cigarettes are then laid by for a few days; afterwards the feeling of one in the mouth is peculiar, but the flavour is not so disagreeable as might be supposed; the effect on a tyro is a sense of a thickened head, with a disposition to take hold of something for support, or to sit down. If the beginner stops here he will not try a tea cigarette again; but if he sits down, and attempts to smoke a second cigarette, inhaling the smoke deeply, then the sense of thickening passes away, and is succeeded by one of immense exhilaration, which stage lasts as long as the smoke continues. But subsequently the agony inflicted by the opium fiend is a shadow to that which overtakes the nauseated victim of the tea cigarettes. Food cannot be looked at for hours, and yet the first step towards recovery is to take a cup of tea. Then an hour afterwards comes a craving for a (Tobacco) cigarette.

After all, therefore (putting aside such innocent growths as the leaves of garden rhubarb, beet, and sage), ordinary Tobacco (with all its disadvantages) which finds its way into the pipes of Europe, is really the least harmful indulgence for the smoking habit which is so widespread, and so alluring. In several eruptive skin diseases the moderate use of Tobacco smoking seems to be decidedly useful, by allaying irritability of the cutaneous nerves. Similarly for obviating constipation of the bowels a morning smoke will serve to relax the muscular fibres of the intestinal walls, and of the fundament, thus bringing about an easy stool after breakfast, and clearing the decks for the day. Charles Lamb, writing about himself as "the late Elia" in his last Essays, has said: "He was temperate in his meals, and diversions, but always kept a little on this side of abstemiousness. Only in the use of the Indian weed he might be thought a little excessive. He took it, he would say, as a

solvent of speech. Marry! as the friendly vapour ascended, how his prattle would curl up sometimes with it! The ligaments which tongue-tied him were loosened, and the stammerer proceeded a statist."

TOMATO.

Lycopersicum ("Wolf's Peach") is the significant name of the passion-rousing Tomato, a native of South America, bearing fruit of a peculiar subacid flavour, wihch is anti-scorbutic, whilst somewhat laxative, and nutritious, except for gouty persons. Of such extensive use as a vegetable food is the Tomato nowadays by all classes, that it needs no literary description here. The succulent, brilliantly red, polished, furrowed, attractive fruit is familiar in every greengrocer's window, and on many a huckster's stall of green-stuff, especially in crowded streets, for purchase by working people. Much of the favour which has become attached to this ruddy vegetable production is due to a widespread impression that it is good for the liver, and corrective of biliary disorders. At first the Tomato fruit was known as "*Mala Æthiopica*," or the "Apple of the moors," which therefore bore an Italian designation, "*Pomei dei mori.*" This name was presently perverted in French to "*Pommes d'amour*," and thence in English to "Love-apple." In the United States of America until about the year 1830 the Tomato was known only as a curiosity. Chemically the Tomato (or Love-apple) contains citric, and malic acids; also it further possesses oxalic acid, or oxalate of potash, in common with our sorrel (wild, and cultivated), and the rhubarb of our kitchen gardens. As already explained when describing these latter vegetables, they are ill-suited on this account for persons of gouty tendencies, and who are disposed to the formation of worrying oxalates of lime in the blood. Equally so is the Tomato by reason of its oxalic attributes; otherwise there are special qualities in Tomatoes which make them of purifying value as food. The shrub which bears this fruit contains sulphur largely, of which the Tomatoes partake. But nothing exists of the two poisonous alkaloids—atropine, and solanine (both contained by the stem, and leaves) —in the fruit. The best Tomatoes are supposed to grow within sight, or smell of the sea. A gardener's hands, when training the plants, become covered with the clammy, greenish moisture thereof, which dries on them in successive coats; when the

hands are washed the stuff comes off by degrees, dyeing the water a bright yellow colour, and quite four washings are needed before this matter can be all removed. Our American cousins persuade themselves that they are never in such perfect health as during the Tomato season; and with ourselves this comparatively modern vegetable has become valued, not simply as a refreshing, cooling salad, or when appetizingly stewed, but essentially as a reputed antibilious article of salutary nutriment. As to any risk of contracting cancerous disease from a free, or habitual indulgence in Tomatoes, the staff of the Cancer Hospitals altogether repudiate the supposition, "seeing no ground whatever for entertaining any such charge." Possibly on the old doctrine of signatures it may have first been suggested as an accusation against the Tomato that its frequent use for food will engender cancerous disease; since it is manifest that the fruit bears a nodulated, tumour-like aspect, whilst showing, when cut into, an appearance of red, raw, morbid, fleshy structure which strongly resembles cancerous diseased flesh, or tumour growth in the human subject. As far as scientific research into the nature, causes, and possible cure of cancer yet pronounces, a certain cellular, and molecular perversion constitutes the dire disease, rather than any toxic, or destructive special work of microbes; so that drugs, or food principles would seem beyond the mark with curative aims. A very remarkable, and highly suggestive fact which bears on this vital question is that the cells of malignant growths have only half that number within themselves of "chromosomes," which is found to be absolutely entire in the normal healthy cells of all the higher animals, and plants. The "chromosomes" are minute, rod-shaped bodies, which under experiment take up the stain of various aniline dyes. This discovery has been placed before the Royal Society by three exponents. Also a further announcement is now made, on the highest authority, that cancer has been detected in fishes, precisely similar to the cancer which invades human beings; which fact opens a new field of research under quite distinct conditions, and promises an important extension of knowledge about the disease.

Chemically, also, in addition to the acids already named, the Tomato contains a volatile oil, with a brown, resinous, extractive matter which is very fragrant, a vegeto-mineral matter, muco-saccharin, some mineral salts, and in all probability an alkaloid.

The whole plant smells unpleasantly, and its juices, when subject to heat by the action of fire, emit a vapour so powerful as to provoke, if inspired, vertigo, and vomiting. The specific principles furnished by the Tomato will, when concentrated, if taken medicinally, produce effects very similar to those which follow the administration of mercurial salts, *viz.*, a sore state of the gums, with a profuse flow of saliva, and with very active stimulation of the liver ; some peevishness is felt on the following day, with a depressing backache, almost suggesting paralysis. The fruit, if given in studied moderation as food, or as physic, will remedy this train of symptoms when due to other idiopathic causes. Some of the American physicians declare the Tomato to be the most useful, and benign medicament known for correcting derangements of the liver. They have caused an extract of the fruit to be prepared by manufacturing chemists which, it is confidently predicted, will depose calomel for the future. This extract proves curative of an ulcerated sore mouth, such as nurses suffer from, or canker ; it is given internally for this purpose, and applied topically to the sore parts. Likewise, foul, unhealthy ulcers may be cleansed, and their healing promoted, by a Tomato poultice, this being repeated as often as the sore seems to need such attention. The poultice should be freshly made each time, and applied hot. Again, a tincture is made from the Tomato for curative purposes by treating its apples with alcohol, and letting this stand (including some of the leaves) for eight days before it is strained, and filtered. A teaspoonful of the tincture is a sufficient dose, two or three times in the day, together with half a wineglassful of cold water. Spaniards, and Italians eat Tomatoes with oil, and pepper ; we take them frequently stewed with butter, after splitting, and stuffing them with bread-crumb, and a spice of garlic.

Telling about a tomato-poultice we are incidentally reminded of another application for cleansing foul sores, which is still more curious, the fresh cow-dung poultice. This is yet of common rustic use, strong testimony being available as to the relief it gives against pain, and as to the speedy maturation it brings about when placed over a gathering abscess, or an indolent boil. The only feasible explanation for these effects seems to be that the said poultice, as a highly septic application, acts much in the same way as the septic tank does upon sewage, wherein " the saprophytic (fermenting) organisms destroy those

which are pathogenic (morbid)," so says Dr. Plowright, of King's Lynn. Again, other quaint poultices range from those of bread-crumb, and bran, to mucilaginous barks and mashes; from slippery elm to slices of pork: from crushed ice to cranberry jam; and from bubbling yeast to burning mustard, and bruised cabbage leaves.

Improvement in the cultivation of the Tomato during recent years first began through recognizing how frequent were the cases occurring of the obstructive, and increasing trouble "*appendicitis*," also through a searching enquiry into the probable causes of this growing malady, so often fatal in its results. A conviction became general, on highly probable grounds, that the attacks depended on impaction of small foreign bodies mischievously lodging themselves within the narrow appendix-tube of the first large bowel (cæcum), such, for instance, as the diminutive seeds of some vegetables, and fruits; whereupon the doom of the Tomato was threatened because of the numerous tiny seeds which it contains. There were at that time in the market Tomatoes, large, small, and highly coloured, all abounding in seeds of such a sort. Here then was a serious situation confronting the extensive growers of Tomatoes, as well as vegetable gardeners in general. However, the leading Tomato-producers did not despair, but declared that if the public declined to eat a Tomato containing seeds, they would grow a Tomato without seeds; and they did,—not utterly and entirely free from seeds, but with so few as to justify the assertion of the originators that they had succeeded in producing a seedless Tomato; whereupon this fruit became restored again to popular favour, being now found to have improved also in sweetness.

By the late Mr. Shirley Hibberd, who was a good naturalist, it was asserted with seeming veracity that the cannibal inhabitants of the Fiji Islands hold in high repute a native Tomato which they have named the *Solanum anthropophagorum*, and which they devour *par excellence* with "*Cold Missionary.*" Nearer home a worthy old dame has been known to enquire in appropriately pathetic tones at a circulating library for Foxe's *Book of To-Martyrs*. "Chops, and Tomato sauce" were ordered to be got ready by Mrs. Bardell for Mr. Pickwick's dinner, as evidenced by the famous letter from his unsuspecting pen to the amatory landlady in Goswell Street. "Gentlemen," says Sergeant Buzfuz in his address to the Jury at the subsequent

trial, "what does this mean?" But he missed a point in not proceeding to add, "I need not tell you, gentlemen, that the popular name for Tomato is *Love-apple.* Is it not manifest therefore what the base deceiver intended?"

Tomatoes are now produced of remarkable size and solidity, running up to six inches in diameter, and weighing each from two to nearly three pounds, whilst as solid as a piece of meat; they defy rough weather, and remain on the market from the first early picking until the coming of frost. For Tomato jelly: "Empty a can of Tomatoes into a porcelain-lined saucepan, with a large slice of onion, a clove or two, a couple of bay leaves, a teaspoonful of chopped green pepper, salt to taste, and a little sugar; put these on to heat; then soak a sufficient quantity of gelatine in a little water for half an hour, and after the Tomatoes have simmered for fifteen minutes let them come to the boil, and pour them over the partly-dissolved gelatine; strain through a fine sieve into a bowl; let the juice become perfectly cool, and, as it begins to thicken, stir well, and turn into an earthenware mould; serve the jelly on a round dish in a bed of fresh, crisp, young lettuce leaves." The jelly is better if prepared the day before it is wanted. A delicate compote of Tomatoes may be made which will retain all the curative virtues of the fresh fruit: "Remove the skin from each of a dozen good-sized, sound, ripe Tomatoes, cut them in quarters, and take out the seeds; make a syrup with half a pound of sugar to half a pint of water, and boil till it pours thick; then put in the Tomatoes, and bring them just to the boil, but do not allow them to go on boiling; remove them to cool in the syrup, and serve in a glass dish."

Tomato-rice is a light, nourishing dish during convalescence from any bilious disorder. "Put into a stewpan half a pound of Carolina rice, cover it with cold water, and bring it to the boil on the fire; then strain, and rinse it well in cold water, and put it back into the stewpan with half a pint of Tomato pulp, and one pint of some light gravy; add an ounce of butter, a little salt, and red pepper; bring again to the boil; simmer gently afterwards until the grains are tender, adding more gravy if needed; the grains of rice should be all separate when cooked."

For making Tomato Marmalade: "Have ready over the fire a kettleful of clean boiling water; into this drop fresh, ripe Tomatoes, and let them remain until the skins crack; then remove them, and put more into the same water. This is a

better, and a quicker way of scalding Tomatoes than by pouring hot water over them. As soon as they are cool enough, peel the Tomatoes, and put them over the fire in a preserving pan for half an hour; then rub them through a sieve, and to each pound of the pulp add half a pound of loaf sugar, and boil until the Tomatoes are quite clear. By cooling a spoonful in a shallow dish one can tell whether it is thick enough, or not. A little lemon-juice added will greatly improve the flavour of the Tomatoes."

TREACLE. (*See* SUGAR).

TRIPE. (*See* MEATS).

TURKEY. (*See* FOWL).

TURNIP. (*See also* ROOTS.)

BELONGING to the Cabbage tribe of plants, the Turnip (*Brassica rapa*) is often found growing of itself in waste places, though not truly wild. As stated among Roots (*page* 595), it possesses certain medicinal virtues. Tusser (1573) called the Turnip "a kitchen-garden root, to boil in butter." It was not until long after Tusser's time that the Turnip became used as a winter food for sheep,—towards the end of the seventeenth century. Though containing over 85 per cent of water, yet this root affords a considerable proportion of nutriment, and is powerfully anti-scorbutic. Syrup made with Turnip juice is an old domestic remedy for chronic cough with hoarseness. For preparing white Turnip juice: "Peel, and grate white Turnips, and squeeze their juice through a cloth; then strain it through a clean napkin; to a quart of this juice add three-tenths of a pound of coarsely-pounded candied sugar; let it dissolve, and boil till it becomes somewhat thick; when this has cooled, strain it again, and pour it into glasses. As a cough remedy take a teaspoonful several times in the day." Some cooks roast Turnips in paper under the embers, serving them with butter, and sugar. It is best to sow Turnips in an arid rather than in a rich soil, wherein it would become degenerate, and would soon lose its dry, agreeable relish. The young Turnips when growing up thickly need to be thinned with an unsparing hand, because, in order to thrive, they require plenty

of room. Accordingly a trite old proverb says, "No man should hoe his own turnips," which implies that neither should anyone eat and drink to excess, so as to surfeit and clog his system; but should obey the discipline of a judicious dietist. Again, another axiom tells that "Turnips, and Tastes (proverbially) differ." The 17th of June is the day of Saint Botolph, the old (Saga) Turnip-man. It is told that the King of Bithynia, in some expedition against the Scythians during the winter season, and when at a great distance from the sea, had a violent longing for a certain small fish known then as *aphy*, a pilchard, or anchovy. His cook cut a Turnip to a perfect imitation of the said fish in shape, which, when fried in oil, well salted, and powdered with the seeds of black poppies, so deceived the King that he praised the root at table as a most excellent fish.

From a large Swede Turnip may be constructed a handsome ornamental substitute for a flower-pot, by scooping out the centre, and then hanging it by three wires, or strings, head downwards. The leaves at once begin to grow, and to curl upwards so as to enfold the tuber, making thus a decorative vase into which a flower in pot (such as a fuschia) may be attractively fitted, though the pot itself should be removed, and the flower planted in loam, or cocoanut fibre, within the hollow Turnip.

For a "*Purée de navets au gratin*": "Take as ingredients two pounds of young Turnips, one quarter of an ounce of flour, half a pint of good generous stock, with salt, pepper, and nutmeg, three ounces of butter, one gill of cream, one medium-sized onion, and some bread-crumbs. Wash, peel, and slice the Turnips, and put them into cold water, with a little salt; peel, and blanch the onion, and chop it fine, then cooking it for ten minutes in an ounce of butter; add the flour, and cook a little without browning; moisten with the stock, and boil up whilst stirring; cook thus for ten minutes; now mix both the Turnips, and the thickened stock, and let them simmer for about half an hour; pass all through a sieve; season to taste with salt, pepper, and a pinch of sugar, also some grated nutmeg; arrange in a pile on the dish, covering it with white sauce, and sprinkle over with bread-crumbs; divide the remainder of the butter into little bits on the top; bake for ten, or fifteen minutes in a hot oven, and serve whilst very hot."

TURPENTINE (*See* ARTICHOKE).

PEPYS (in his *Diary*, July 17th, 1664) wrote: "Dr. Burnett has showed me the manner of eating Turpentine, which pleases me well, for it is with great ease." Again, on December 31st: "So ends the old year; I bless God, with great joy to me. I have never been in so good a plight as to my health these ten years as I am at this day, and have been these four, or five months. But I am at a great loss to know whether it be my hare's foote, or taking every morning of a pill of Turpentine, or my having left off the wearing of a gowne."

VEAL. (*See* MEATS.)

VEGETABLES.

IN ancient Rome (as Cato records) the principal citizens had their large vegetable gardens near the city, the same being cultivated by the owners themselves, some among whom derived their family names in this way as successful specialists; such as Piso from the Pea, Cicero from the Vetch, Fabius from the Bean, and Lentulus from the Lentil. The chief value of vegetables as food lies in the mineral salts which they contain abundantly; these are combined with much water, but quite sparingly with proteid nourishment available for bodily repair; their framework consists altogether of cellulose. Greens, and Savoys afford most nitrogenous matter; whilst, together with Leeks, Cabbage, Turnips, Salsify, and Carrots, they are endowed with carbohydrates, and mineral salts. But the effect of cooking upon green vegetables, as it is generally practised, serves only to reduce their already poor stock of nutrients. As a whole such vegetables are not readily digested by the stomach, and when reaching the intestines their bulk makes them difficult to be assimilated; if they are at all stale, then discomfiting fermentation takes place, engendering noxious gases, and provoking troublesome flatulence, with distension. To be wholesome vegetables should always be eaten as fresh as possible; their main use is as a source of mineral salts, particularly those of potash, which keep the blood supplied with alkaline elements, and thus lower the acidity of the urine; so that vegetable foods are to be especially advised for persons liable to gravel, (except

garden Rhubarb, Sorrel, and Tomatoes, because of their oxalic acid). Vegetable feeders require relatively more table salt with their food than mixed feeders, particularly with Potatoes, so as to neutralize chemically such excess of mineral salts as might otherwise be prejudicial; for this reason herbivorous animals crave for common salt, but not so the carnivorous animals. For gouty, or rheumatic persons the acidity of the urine can be certainly kept in check by a free use of green vegetables, and of such other foods as contain alkaline salts of potash; but at the same time the diet must not be too poor in proteids. As for the vegetables, they are not to be cooked in a deluge of water, else this, when thrown away before serving, will carry with it most of the soluble alkaline salts which should serve to neutralize the acids of digestive fermentation. Green fruits (uncooked), and raw vegetables disturb the stomach and bowels, because the starch which they contain cannot be acted upon by the saliva during mastication when these foods are unboiled; then, on their reaching the stomach, the gastric juice cannot gain access to their structure so as to digest the albuminoid constituents, therefore the substances remain ill-digested, and troublesome sour fermentation is the result.

That cooking increases the digestibility of things eaten at table is true only with respect to vegetable foods, whilst that of animal foods is diminished rather than increased by cooking. But the flatulence which so often occurs after taking a meal of cooked green vegetables, particularly of Cabbage, does not similarly happen if we eat practically the same green vegetables in the form of plain salads uncooked; therefore it *must* be the cooking process which then gives rise to this obnoxious difference, that is, through the splitting-up effect of the heat, and the fermentation of the carbohydrates (starch, sugar, and fat) induced by cooking, when a formation of fermentative acids, and gases occurs (chiefly carburetted, phosphuretted, and sulphuretted hydrogen) in the system. Vegetable foods, unless eaten in large quantities, will not afford a sufficiency of proteid nourishment to the body; and what proteid food is present in vegetables has its value lowered in many cases by the difficulty with which it is utilized therein. Furthermore, the nitrogenous essentials of bodily nourishment can be obtained in the needful concentrated state only from animal foods, these essentials making for nervous energy, and intellectual capacity, as well

as for power to resist disease. Meat, fowl, and fish are concentrated forms of nitrogenous proteid nourishment. Then, again, a purely vegetable diet must of necessity be bulky, because so much water is included therein, particularly when cooked, and so much unassimilable cellulose is bound up therewith; whilst the limited amount of proteid sustenance present is diluted by a disproportionate quantity of starch. If boiling water is poured upon the starch grains they swell up, and burst, so that the true starch escapes from between the layers of cellulose. It is this rupture of the starch grains which is sought to be effected by the proper cooking of vegetable foods. The mineral constituents of most vegetables increase the solubility in the system of certain gouty salts (bi-urate), but the mineral constituents of meat tend to diminish this solubility. Dr. Luff, a practised experimentalist, gives the first place in this direction to Spinach against a gouty habit of body; Brussels Sprouts, and French Beans come next on his list, being followed by Cabbage, Turnip-tops, Turnips, and Celery. It is now understood that vegetables and plants obtain the mineral salts, and earth salts on which they depend for their nourishment, through the agency of (microscopical) organisms known as *nitro-bacteria;* these attack the surface of rocks wherein potash, and iron are contained, and disintegrate in a similar way all dead organic matters, dead animals, dung, etc., dissociating the compact atoms, and thus producing nitrates, whereby the foundation of all fertility is laid.

Thomas Tryon (*Way to Health*, 1650) wrote: "Raw herbs are a sublime kind of food, and are to be preferred to that which is boiled, for the pure volatile spirit in the herbs cannot endure the violence of the fire, but in boiling a great part of this is evaporated. For which cause boiled herbs lie heavier, and colder in the stomach than do raw herbs, which is scarcely believed by many persons. For, they that love boiled herbs do generally eat much flesh with them, and so cannot discern the operation these have." "The strength, and comforting quality of everything consists principally in the *spirituous* parts, which are lost by evaporation in the boiling, and therefore the substance becomes of quite another nature. That lively tincture, and spirituous part which it possessed whilst raw, can never be recovered by all the ingredients which nature, or art can afford. Do not all creatures eat their

herbs raw ? and are they not admirably sustained thereby ? " Anyhow, vegetables should be cooked only in their own juices, or at least in as little water as possible ; most of the valuable salts will otherwise be assuredly washed out, and sacrificed. When deluged with water in boiling the substance of vegetables retains only as much food value as boiled shavings would possess ; and it is this worthless mass which must be then eaten, and its digestion attempted. It will in the case of Cabbage stay inert within the stomach and bowels, for five or six hours, giving rise to flatulence, distension, and discomfort. If the Cabbage were eaten without being cooked at all, it would be digested in less than three hours. For obtaining the maximum of benefit from cooked roots, and green vegetables, they should always be steamed over boiling water, and not boiled out of all their goodness.

Vegetables, and milk served together are likely to disagree, because the milk (which when taken by itself becomes quickly digested) is then retained in admixture with the more slowly-digesting vegetable food, and undergoes fermentation, with sour products. Milk, and meat, are likewise a bad combination for the same reason ; milk alone is chiefly digested beyond the stomach in the small intestine, which it speedily reaches. Some salt should be put with vegetables when they are boiled ; and a very little butter, if added just before they are served, gives improved flavour. The length of time for cooking them should be twice, sometimes three times as long as is generally allowed in this country. All green vegetables should be boiled in an open saucepan, and should be put on in a little boiling water to be cooked (unless special reasons can be given for the contrary) ; roots are to be boiled with the saucepan lid kept on, the preservation of a good colour being in either case the object in view. Purées of vegetables, with meat, are of great value for the sick, likewise to persons in health but with defective teeth, or soreness affecting the membranes of mouth, and throat ; also as part of the diet of growing children. A purée is, as the name denotes, essentially a purifying process as to foods, whereby the edible parts are separated, and removed from the rough, hard, inedible parts by the mechanism of sifting. Thus from leguminous pods the indigestible shells are removed ; from roots, and leaves, the stringy cellulose is separated. Tough meat, old fowls, and the remains of cold poultry can be turned to good account in a purée.

Onions, and Cabbages, were not grown in England to any extent until Queen Elizabeth's time, when they began to be cultivated widely, together with Carrots, and Parsnips, throughout Suffolk, and at Fulham. It was half a century later before "Colle-flowers" became generally known; and at this period Turnips were never used in cookery, but were always boiled, and eaten separately with butter. Radishes were grown, also Beans, and Peas; likewise Melons, and Pumpkins. By the very poor a coarse kind of bread was made with Peas, and Acorns. The *Medical Magazine* teaches that nowadays raw market vegetables should be washed, and then soaked for at least half an hour in a weak solution of tartaric acid, which is a cheap, and powerful antiseptic, of quite a harmless character.

The Vegetable Marrow, a wholesome production of the kitchen garden in early autumn, came at first from Persia, and grows best in warm regions. It is eaten mostly when half-ripe, the inner pith, and the numerous seeds being taken out; when fully grown it can be made into pies like the Pumpkin. A variety termed the Custard Marrow has the more delicate flavour; it resembles a costard apple, whence comes the name. Until 1830 the Vegetable Marrow went by the name of *Gourd*. It contains about 90 per cent of water, and is insipid when boiled. A tasty, and wholesome, yet withal doubly antiseptic, vegetable dish may be prepared as "baked Vegetable Marrow, with sage, and onions": "Cut the Marrow in halves lengthways, and take out the seeds; parboil three onions, and chop them into pieces with five, or six sage leaves; add one tablespoonful of bread-crumbs, with salt, and pepper to taste; mix all together, and place the mixture inside the Marrow, then close it, and tie it up; dredge with flour; put some dripping in a baking dish, then put in the Marrow, and bake for half an hour in a pretty hot oven. It may be served with brown sauce." A good nourishing dish for old persons, which is easily masticated, and readily digested, is to be contrived by making it of fresh, lean meat first boiled in a very little water, and then put inside a Vegetable Marrow which has been pared, and cleared of its seeds. This Marrow should be cut into two halves, either across the middle, or lengthways, and then tied up in muslin, being fitted together for boiling, from ten to fifteen minutes, according to size. Vegetable Marrow can be converted into a nice wholesome curry.

For making jam of this garden product: "Peel the

Marrows, and cut them into inch-sized dice; make a syrup with two pounds of brown sugar, and five pints of water; lay the Marrows in this, and let them steep for two days, and then strain the syrup off; make a second syrup with a pound of loaf sugar, the juice, and thinly-pared rind of two lemons, a few grains of Cayenne pepper, and one ounce of whole ginger (well bruised) for each pound of the Marrow. Lay the strained Marrow in this second syrup, and set it over a glowing fire; when it begins to clear add a liqueur-glassful of brandy, and cook until the jam is transparent; then it will be ready for putting into pots, and to be tied down." A very nourishing, and delicate soup may be concocted for an invalid from the Vegetable Marrow, boiled in white stock, with milk, an onion, pepper, salt, and one tablespoonful of cornflour.

From the time of Pythagoras, the doctrine and practice of an entirely vegetable diet has been enjoined by many advocates, the same mode of living having been pursued for ages by numerous Hindus, and Buddhists. As to this food system known as vegetarianism, or living exclusively on vegetable sustenance, the question, to begin with, does not lie in the problem (as many persons argue) whether we are structurally, and physiologically constituted as herbivorous, or as carnivorous beings, for it is perfectly certain we are neither. Carnivorous animals feed on flesh alone, and eat that flesh raw, but nobody proposes that we should imitate them in this practice. Again, the herbivorous creatures eat raw grass, but nobody is rash enough to suggest that we should follow their example. From which source, then, can we best obtain the nutritive constituents of our main food supplies? We may not by any means suppose that merely because the chemical constituents of vegetables are equal in nutritive value to the corresponding constituents of animal food, that therefore as a whole, vegetable nourishment can replace meat, or that, *vice versâ*, meat can altogether be substituted for vegetable diet. The form in which the nutritive ingredients are presented to the digestive organs materially affects their utility as foods. "A glass of whisky," as Dr. Hutchison forcibly argues, "is chemically the same whether it be taken neat, or diluted with a tumblerful of water; but the effects on the body are radically different." Moreover, man stands apart from all other creatures as a *cooking animal*; his teeth are not constructed for munching, and grinding, hard, raw grain;

nor are his digestive organs naturally adapted for assimilating grain in such a condition, even if it were reduced to pulp by mastication at first. *Vegetarianism* has much to be said in its favour for persons of adequate digestive capabilities; but certain objections must be raised against its adoption unreservedly when the digestive powers are feeble, and the measure of food at meals limited of necessity by personal incapacities.

There are fundamental principles connected with the system in question which closely underlie the main issue. One of these is embodied in the important fact that the cell walls which enclose the proteids, or nitrogenous nourishment, consist in vegetables of cellulose, a tough membrane which makes the extraction of such proteids more difficult from within the cells than it is from animal flesh; and this cellulose is characterized by an extraordinary insolubility. "The vegetarian question," writes Dr. R. Hutchison, "is really a question of nitrogen, and of that alone, which can be obtained in a concentrated form only from animal sources. Moreover, energy is not to be confused with muscular strength. A grass-fed cart-horse is strong; a corn-fed hunter is energetic. Such energy is a property of the nervous system; strength is an endowment of the muscles, and these are chiefly nourished by the carbohydrates which vegetables can supply; but the brain needs nitrogenous proteids." Dr. Kuttner, of Berlin, having made an impartial investigation into the respective merits of vegetarianism, and mixed diet, has come to the conclusion that a mixed diet, including meat, is most suitable for man, because exclusive vegetable nourishment is too bulky, promoting discomforts of digestion, and being assimilable only to a certain extent; moreover, animal stuffs engender fuller bodily warmth. It is true that, given a judicious choice, and a proper preparation of vegetables, they will prove not only sufficient to maintain the bodily condition, but even to increase bodily weight. But the subjects who practice this dietary do not compare favourably with mixed eaters as to their powers of solid weight, endurance, and ability to resist disease. Nevertheless, a modified vegetarian diet, supplemented, that is, by such animal products as milk, butter, cheese, honey, and eggs, is admirably well suited for corpulent persons whose intestinal energies are sluggish, and who are disposed to costiveness; likewise such a diet is attended with brilliant results in nervous dyspepsia, especially for gouty

persons. Seeing, too, that the pulse-rate is diminished under a diet mainly vegetable, this diet is quite to be commended for conditions of a troubled, excitable heart, or for muscular thickening of its walls; but not for states of heart enfeebled from weakness, or incompetency. Again, a marked addition of vegetables to the diet is very useful in various cases of skin disorder, and for scrofulous affections. At a Congress of the Berlin Medical Society (1902) where vegetarianism was discussed, as to whether, or not, it makes for general health, the opinion arrived at, after arguments had been fairly advanced on both sides, was that "exclusive vegetarianism is not good for mankind. For instance, albumin cannot be obtained of proper quality, and in sufficient amounts from such a regimen; and therefore, as one serious disadvantage, vegetarians are less able to resist infection than persons unrestricted in their dietary."

Generally speaking, all foods abounding in cellulose, and which leave a considerable amount of its residue unnegotiated within the intestines, serve to stimulate the propelling peristaltic action thereof on this ballast, and to promote its passage onwards; in which way constipation is prevented, when the bowel energy has become torpid unless some aid of this kind is afforded. Such foods are wholesome green vegetables, oatmeal, wholemeal bread, and some fruits. Furthermore, these vegetable foods, which are rich in cellulose, possess certain laxative properties due to the organic acids which they contain, and to the fermentative processes they undergo within the bowels. It is an indisputable fact that vegetarians are remarkably free from such gouty disorders as arise through lithic acid in the blood, leading to gravel, and stone in the bladder; and numerous persons who suffered therefrom before becoming vegetarians, have subsequently altogether escaped. "I've found a sovereign cure for the gout, Sammy," said Mr. Weller, the elder (*Pickwick*). "The gout is a complaint as arises from too much ease, and comfort. If ever you're attacked with the gout, Sir" (to Mr. Pickwick), "jist you marry a widder as has got a good loud woice, with a decent notion of usin' it, and you'll never have the gout agin. It's a capital perscription, Sir; I takes it reg'lar, and I can warrant it to drive away any illness as is caused by too much jollity."

A paramount advantage derived from vegetable foods is gained because of their constitution being altogether of a

building-up character, as distinguished from animal life, (which involves excretions of the broken-down products as part of its being). With vegetables there is no throwing off effete matters as corrupt waste of their consumed substance from day to day; but in animal life, such ash (as it were of the stoking) is rejected by the skin, the kidneys, the lungs, the bowels, and other excretory channels. The most striking chemical feature of vegetable foods is the large proportion of carbohydrates which they contain, such as starch, and sugar, in abundance; potash as an essential mineral salt for healthy life being largely represented in vegetables, more so than soda. These carbohydrates of vegetable food undergoing digestion within the small intestines form acids, through their alliance with the bacteria present there, which acids diminish putrefaction; so that in order to prevent putrefactive changes within the bowels vegetables must be eaten for their carbohydrates (starch, and sugar, or oils). This necessity explains the very fetid character of the stools passed by patients who are being fed mainly, if not exclusively, on lean meat. Milk, again, is an intestinal antiseptic. Within the small intestine the contents remain fluid throughout its entire length.

But the human nervous system seems to require a plentiful supply of proteid support if those occult influences which emanate from the brain and spinal marrow, are to be maintained in sufficient potency for enabling the tissues to ward off disease. As Dr. Hutchison goes on to say: "Everyone knows the feeling of satisfaction which follows a meal containing good meat; and that such feeling of benefit received is due to the proteid substance, and not to the meat extractives, is shown by the fact that whereas the addition of the meat extractives to such non-animal food as bread is not able to produce this feeling, yet such vegetable substances as (oatmeal, for instance) are rich in proteid are capable of exciting it to a considerable degree." The modified form of vegetarianism which supplements proteid by giving also eggs, and milk, has much to recommend it, and will often agree better with gouty subjects than a diet which includes meat in any amount. It must be concluded, then, that if the complement of proteid food is to be derived altogether from vegetable sources the diet will have to be bulky, one of the first results being distension of the stomach, and bowels; thus is produced the so-called *potato-belly* of the Irish peasant. Again, for the management by the stomach and bowels of so large a mass of

material, there is implied a special expenditure of nervous energy, and of blood supply, so that correspondingly less of these outputs will be left for the purposes of the nervous system, and brain, for bodily exercise, and other physical demands. Similarly, the watery character of an exclusively vegetable diet is disadvantageous; this disproportion as to solids accounts for the soft flabby condition in flesh of persons who habitually consume large quantities of the more watery sorts of vegetable food; it also is an important factor in lowering the disease-resisting power which characterizes such persons. A somewhat parallel effect ensues with respect to drug action, for, as Sir Lauder Brunton has observed, "the vegetarian is only slightly affected by certain drugs which in the case of flesh-eaters would produce positively violent results."

If it happens that a man or a woman possesses a specially energetic and powerful digestive system, it does not then matter much what system of feeding is followed, because whatever is eaten provokes no difficulty of digestion afterwards, as to extracting sufficient carbon and nitrogen therefrom. But for persons with very limited digestive powers, it is beyond the compass of their physical capacity to become vegetarians. The disadvantages of a purely vegetable diet affect the outdoor labourer much less than the person engaged in more sedentary pursuits; the former stands in daily need of carbohydrates (such as vegetables afford) in large amount, so as to enable the performance of his muscular work; whilst with the latter the demand for proteid is more considerable. Vegetarians have sometimes asserted that the eating of flesh food is incompatible with the cultivation of a singing voice, this proposition being supported by the argument that the sweet-singing vocal birds are eaters of grain, fruit, and vegetables; that in fact no carnivorous bird could ever charm by a song, but only *croak*, having a sluggish liver, and being of a melancholy strain. Examples to this effect are quoted of the "croaking nightingale," the "bilious thrush," and the "generally melancholy robin." But the exact converse of this proposition really holds good, since the great majority of sweet singing birds are strictly carnivorous; even the canary will appreciate scraps of meat, and hard-boiled egg, when he can get the same, and will sing all the better for such additions to his dietary. Furthermore, if vegetarians allow themselves milk, and eggs, they are in truth killing animal life indirectly; for

in order that the farmer may get a profit on his milk and eggs, he has to kill off the bulls, which give no milk, and a large number of cocks which yield no eggs. If he reared all these, and allowed them to die a natural death, not only would his farmyard be a perfect pandemonium, but his expenses would be such that in order to sell his milk and his eggs at a profit, he would have to demand a prohibitive price for them; so that those persons who consume these articles, though they do not eat flesh, are yet accessory to the slaughter of animals. In fact, this cock-and-bull story is completely convincing.

As a general conclusion, it must be said that for healthy persons meat and fish (also eggs, milk, and cheese) should be the proteid furnishers, together with vegetable foods; though for persons disposed to be gouty, perhaps milk and cheese are to be more highly commended than meat. It is to be noted that vegetable foods are less highly flavoured than some animal provisions, and meats, but they have the compensating advantage of not being liable to undergo putrefactive impairment, and of rarely inducing disease. The abundant cellulose which gives bulk to the intestinal contents during digestion, and size to the fæces, signifies vegetarianism more or less; and, (as is said somewhat coarsely in *Tristram Shandy*,) "there are persons who will draw a man's character from no other helps in the world but merely from his evacuations; but this often gives a very incorrect outline, unless indeed, you take a sketch of his repletions too. I should have no objection to this method, but that I think it must smell too strong of the lamp." Robert Louis Stevenson, in one of his fables, *The Distinguished Stranger* (1896), makes a covert thrust at vegetarians which is scarcely fair. It tells of a stranger coming to this earth from a neighbouring planet, and propounding questions to a philosopher about the objects now seen by him for the first time; the trees he admired for their heavenward stature, and their singing leaves; but men and women he disparaged, and as to the cows he thought them dirty, whilst never looking upwards like the noble trees of the forest. Then the philosopher explained that the cows were engaged in eating grass, and had to spend so much time in attending to this food of theirs that they were too busy therewith for thinking, or talking, or looking about, or keeping themselves clean. The intended moral is manifest. Edward Fitzgerald, writing (September, 1833) to his friend Donne (afterwards

Licenser of Plays) from Geldestone, says, "I am at present rather liable to be overset by any weariness, (and where can any be found that can match the effect of two oratorios?) since living altogether on vegetables for the last three months; that is, I have given up meat. The truth is, mine is a wrong time of life to begin a change of that kind; it is either too early, or too late. But I have no doubt at all of the advantage of giving up meat. I find already much good from it in lightness, and airiness of head; whereas I was always before clouded, and more or less morbid after meat. The loss of strength is to be expected. I shall keep on, and see if that also will turn, and change into strength. I have almost Utopian notions about vegetable diet, —begging pardon for making use of such a vile, Cheltenhamic phrase. Why do you not bring your children up to it? To be sure, the chance is that after guarding their vegetable morals for years, they would be seduced by some roast partridge, with bread sauce, and become ungodly." Again, in a letter to John Allen, from Bedford (1842): "I occasionally read sentences about the Virtues from the collection of Stobœus, and look into *Sartor Resartus*, which has fine things in it, and a little Dante, and a little Shakespeare. But the great secret of all is the not eating of meat. To that the world must come, I am sure. Only it makes one grasshopper foolish." Again (October 1841), when writing to Tennyson from Naseby, Fitzgerald said, "Fits of exultation are not very common with me now, as—after leaving off beef—my life has become of an even grey paper character, needing no great excitement, and as pleased with Naseby as Naples."

As a palatable, and excellent "Vegetable Curry": Chop four onions, and four apples; put them in a pan with a quarter of a pound of butter, and fry them a light brown; then add a table-spoonful of genuine curry powder, a little stock, and some salt. Parboil six large potatoes whole, cut them up, and put them with the other ingredients; let all stew gently for an hour, whilst the pot is covered. Likewise, vegetable marrow can be prepared capitally in imitation of apples, as a digestive accompaniment of roast duck, or goose. Take a large vegetable marrow, choosing the white sort, with lumps over the outside; after having peeled it, and taken away the soft pulp and seeds, cut it in thin slices. Butter an enamelled pot, and put into it layers of the thinly sliced marrow, and of sugar (take for one good sized marrow a

large breakfastcupful of sugar), a tablespoonful of flour, or of bread crumbs, ten cloves, a tumblerful of white wine and vinegar mixed ; pour this wine over the uppermost layer of marrow and sugar, adding a pinch of salt. Then let the stewpan simmer for two hours, stirring carefully for fear of its burning.

VINE. (*See* GRAPES.)

VINEGAR. (*See* MALT).

A LITTLE Vinegar, when administered to animals about to be killed for eating, will render their flesh less tough than it otherwise would prove ; and it is not unusual to give a spoonful of vinegar to poultry shortly before their slaughter for the table.

VIOLET SWEETMEATS. (*See* CONFECTIONS.)

BY the Romans of old a favourite wine was made from Violet flowers. What is known familiarly as Violet powder, for nursery uses, and cosmetic purposes, is the pulverized rhizome, or root stalk of *Iris florentina*, the blue flag. This sweet-scented rhizome is peeled, and dried in the sun, its agreeable violet-like odour becoming thus more fully developed. Orris root contains a fragrant volatile oil, much starch, and some soft brownish resin, of an acrid taste : also some tannin, which turns iron salts green. About Norfolk, and elsewhere in England, a piece of the root is suspended by a tape around the neck of a child who is cutting his, or her teeth, so as to assist the process by munching, and mumbling the tender gums thereupon : when, it may be that the profuse flow of saliva which is thus stimulated mitigates soreness. But Dr. Pereira admonishes that such a practice is objectionable, since it is not unfrequently attended with irritation of the mouth, and disorder of the stomach and bowels. Furthermore, the risk of the rhizome getting into the gullet, or windpipe, is not to be overlooked. One fatal case of this kind is recorded. Crystals of oxalate of lime have been found in Orris root.

WALNUT. (*See also* NUTS).

THE *Juglans regia*, royal nut of Jupiter (see also *page* 503), and known to us as Walnut, is so named from the word *Wal*, as

Teutonic for "stranger." The tree was a native of Asia Minor, but is grown freely in England. "As for the timber," said Fuller, "it may be termed the English Shittim wood." The London Society of Apothecaries has directed that the unripe fruit of the Walnut shall be used pharmaceutically on account of its worm-expelling virtues: on the adoption of which ordinance, for certain, in the immortal words of Mrs. Gamp, "Lambs would not forgive, nor worms forget." It is remarkable that no insects will prey on the leaves of this tree, which yield a brown dye, supposed to contain iodine, such being used by gipsies for staining their skin. Nucin, or juglon, is the active chemical principle of the several parts of the tree, and its fruit. M. Negrier, and others, have treated scrofulous children very successfully with infusion of fresh leaves from Walnut trees in England. Each patient took two or three cupfuls of this infusion, sweetened with honey, daily, also some of the expressed leaf juice thickened by evaporation to the consistence of an extract, and made into small pills. Sores (of glands,) ulcers, swelling and caries of bones, and strumously inflamed eyes, were all washed with a strong decoction of the leaves, and then kept covered with lint wetted in the infusion. This treatment was chiefly pursued in the spring. After two months, half the number of children were cured, and after six months all were perfectly well. About four grains of the extract were contained in each pill, two to four pills being given every day. The decoction for outward use is to be made by boiling a handful of the fresh bruised leaves for fifteen minutes in a quart of water, and straining this when cool. The whole fruit, when young and unripe, makes a wholesome, tender, anti-scorbutic pickle, which is slightly laxative. "The bagman's uncle" (*see Pickwick*) "was once pitched out of his gig, and knocked head first against a milestone. There he lay, stunned, and so cut about the face with some gravel that his own mother wouldn't have known him. After he was picked up, and had been bled, he jumped up in bed, and demanded a mutton chop, and a pickled walnut, instantly. He was very fond of pickled walnuts, and said he always found that, taken without vinegar, they relished the beer."

Some physicians are in favour at present of giving walnuts—a dozen a day at least—to gouty patients, and for chronic rheumatism; the nuts have to be well masticated. It is found that admirable results are produced, swellings go down, and pain

decreases. Preserved Walnuts serve for obviating constipation, one of these being sufficiently laxative for a child. Allow half a pound of sugar to each score of green Walnuts. Pierce the nuts with a needle, and put them into a stone jar, with the sugar. Stand the jar in a deep saucepan of boiling water, and allow the contents to continue boiling steadily for three hours, taking care that none of the water gets into the jar; the sugar being dissolved should cover the walnuts. When done tie them down, and in six months the preserve will be ready for use. Walnut leaves are of notable benefit for helping to cure secondary sores, even when otherwise obstinate; these sores should be coated with sugar saturated with a strong decoction of the bruised fresh leaves, and must be well cleansed between the times of thus dressing them.

Walnut catsup embodies the medicinal virtues of the unripe nuts, and will help their curative purposes, if used as a condiment at table. To make this, the unripe nuts, before their shells harden, are beaten to a pulp, and the juice is then separated by straining; salt, vinegar and spices are added, and the whole is gently boiled. The leaves of the American Black Walnut tree, which grows naturally in Virginia, are of the highest curative value for treating scrofulous sores, and eruptions on the skin. Chronic indolent ulcers have been healed by them after every other tried application had failed. An ounce of the fresh leaves (or rather less of the dried leaves) should be infused in twelve ounces of boiling water, to stand for six hours, and then to be strained off. A small wineglassful of the infusion to be taken three times a day, and the sore places to be dressed with linen soaked in another such infusion, but made of double strength. Or, an extract may be made from a strong decoction of the leaves, slowly reduced to a proper thick consistence, four grains thereof rolled into a small bolus each night and morning. The Virginian Walnuts are twice as large as those grown in England, being more rank and oily, with a thick, hard, adherent shell, so that "they come not clear of the husk as the Walnut in France doth." Pepys, on September 29th (Lord's-day, 1660), at the Hope Tavern, with Mr. Chaplin, and two other friends, did drink off two or three quarts of wine, and did eat about two hundred walnuts." In Flanders, against ague, the sick person catches a large black spider, and imprisons it between the two halves of a Walnut-shell, then wearing it round the neck.

WATER.

THE general supposition is that when water is drunk, particularly whilst fasting from food, it is taken up quickly by the absorbents from the interior of the stomach into the blood. But, as Dr. R. Hutchison now explains, it has become incontestably established as a fact that water is not absorbed by the mucous lining membrane of the stomach at all. When water enters the stomach it begins to flow out into the intestine at the other end of the stomach, into the first intestine almost at once, the process going on in little gushes through the (pylorus) outlet until all the water has escaped. Roughly speaking, one may assume that a pint of water will have entirely issued from the stomach in the space of about three quarters of an hour. Hot water escapes from the stomach much more rapidly than cold; the heat increases strongly the movements of the stomach walls, and at the same time seems to cause its outlet (pylorus) to open, this being a powerful aid to sluggish digestion. Water is exclusively absorbed into the blood from within the intestines. The statement that a free consumption of Water at meals is apt to hinder digestion by diluting the gastric juice is not well grounded. Water is but a slight excitant of gastric digestion. If it be impure contaminated water, it passes out again onwards before the antiseptic gastric juice has time to act on any noxious germs which it may contain; for which reason any such contaminated water is much more likely to convey disease into the system than is contaminated milk. This latter is detained in the stomach for partial digestion there, and its germs are more prone to be destroyed straightway. To boil water is the only way for rendering it reliably free from danger. If spirit, or wine, is added to the Water imbibed, this does not kill any germs contained therein, or make it any safer for drinking. In China, where the sewage of the densely populated country is carried off chiefly by the rivers, (so that the danger of contracting disease through drinking their water must be great), the universal use of cooked water in some form is a matter of history; and it is probable that instinct, or experience, has prompted the Chinaman to drink but very little water except that which has been cooked. The every-day national drink is weak tea, made in a large teapot, and kept in a wadded basket so as to retain the heat; the whole family use it, and the very poor drink plain hot water just tinged

with tea. Dr. Dabbs has recently explained how to employ a rough but reliable *extempore* test in the case of suspected drinking water. "To get a perfectly clean, rounded, glass soda-water bottle and fill it with some of the questionable water; then to cork it with a new, unimpeachable cork. But before it is corked down, the addition must be made to it of as much white sifted cane sugar as would cover a two shilling piece. The bottle is then to be corked, and placed for two days in the sun. If its contents become milky or clouded, then the presence of sewage is to be suspected. "I have never known this rough test to fail," says Dr. Dabbs. "On the whole," writes Dr. Hutchison, "after an exhaustive, and impartial consideration of the subject, I am bound to admit that there is no better beverage for gouty persons than plain water; and they should be encouraged to drink freely of it, as an admirable aid to the elimination of nitrogenous waste." Again, Dr. Woods Hutchinson (*Lancet*, 1903) says, "The one element, whether we call it a food, or a medicine, which has been found to be of overwhelming importance and value in the treatment of gout, is Water; it acts most admirably, first by sweeping out the alimentary canal primarily, and the liver, kidneys, and skin secondarily, and next by supplying to the body cells that abundant salt water bath in which alone they can live, and discharge their functions. Ninety-nine per cent of our body cells, we too often forget, are still aquatic organisms, and marine at that. What salts, we may choose to dissolve in the water is purely a matter of taste. The one active agent in all the mineral waters which are so much vaunted, is the water; and the wonderful effect of mineral water resorts, many in number, for helping to cure this disease (the gout) is mainly due to the one thing which they all have in common—plain water,—plus suggestion, and aided of course by the healthful air of the springs, also by the excellent hygienic rules which are enjoined as part of the cure.

By the substitution of distilled water, or rain water, instead of water drawn from the well, or pump, for daily drinking, cases of goitre, or enlarged gland in front of the neck, have been successfully treated when all the customary medicinal agents, such as iodine, iodide of potash, hydrofluoric acid, and digitalis, had signally failed. Even when the glandular tumour is of long standing, the exclusive use of distilled water as a beverage will gradually bring about diminution, and finally disappearance of

the enlargement. In 1809, Dr. Lambe contended that "common water" is the chief vehicle by which cancerous disease invades the body, because of the putrescent, and inflammable matters always present more or less in such "common water." Also, said Dr. Lambe, "for the mitigation of cancer, a strictly vegetable diet must be joined to the use of water purified by distillation. Under this combined regimen life may probably be prolonged to an indefinite extent, even in certain cases of ulcerating cancer, which is of long standing. The spread of cancerous disease into contiguous parts is completely prevented by the sole use of pure distilled water for drinking."

It is told pathetically that George Washington, the father of his country, was literally bled to death. The doctors in attendance on him, after repeated and copious venesection, resolved nevertheless to bleed him once more, and the great President died within a few minutes after the operation. With his last breath his pitiful cry was "Water! water! oh, give me water!" *but this was denied him.* "Plentiful water drinking," wrote Dr. King Chambers, "is to be advised for persons who labour under Bright's disease (albuminuria), where the smaller excretive blood-vessels of the kidneys are stiff, and blocked, and obstructed with thickening of their coats; hence they fail to carry on their blood into the kidneys to be purified, and thus the blood becomes fouled with the retained urea, and fails to be properly oxygenated, so that its red particles are deficient. Moreover, an exudation of the thinner—serous—part of the blood takes place into the open central chambers of the kidneys; and in order to wash these and other effete matters away, a plentiful use of aqueous drinks should be employed, which will flow out through the said organs. This will by no means increase a tendency to dropsy, but will rather obviate it; in point of fact, the only safe and thoroughly reliable diuretic for the relief of albuminous dropsy is water, and it is a most likely preventive of any such complication. As nourishment under the dilemma now described, whey (being free from casein proteid) is a very appropriate form of nourishment.

For any acute congestion, or inflammation of the kidneys, a diet almost exclusively of skimmed milk, or of diluted milk, will be essential, whilst the patient is kept warm in bed under woollen clothing, and abstaining almost, if not altogether, from animal food, even as broth, or soup. The restriction to milk diet should be maintained far into convalescence, so as to avoid

bleeding from the kidneys if stimulated by stronger foods. When thirsty, the patient should drink barley water, or thin arrowroot, or apple water, and later on, "imperial drink." For making this, put two teaspoonfuls of cream of tartar into a jug, and pour in two pints of boiling water, so as to dissolve the same; then add the juice of a lemon, and some sugar, mixing these together. When it is cool the drink may be placed by the bedside, and taken at will. Different dietary tactics are needed for chronic kidney congestion, when the heart gets to require ample support, so that animal food, such as red meat, must be allowed daily, else the system will break down. If the urine becomes scanty during fever, or in pneumonia of a low type, the acid phosphates are then of much service, likewise fresh lemon juice with water.

John Ruskin, in July, 1871, penned the following characteristic letter: "My dearest Tom, really your simplicity about naughty me is the most comic thing I know, among all my old friends. *Me*, docile to doctors! I watched them (when I had three) to see what they knew of the matter, did what they advised for two days; found they were utterly ignorant of the illness, and were killing me. I had inflammation of the bowels, and they gave me ice, and tried to nourish me with milk. Another twelve hours, and I should have been past hope. I stopped in the middle of a draught of iced water, burning with insatiable thirst, thought over the illness myself steadily, and ordered the doctors out of the house. Everybody was in an agony, but I swore and raged till they had to give in, ordered hot toast and water in quantities, and mustard poultices to the bowels. One doctor had advised fomentation, that I persevered with, adding mustard to give outside pain. I used brandy and water as hot as I could drink it for stimulant, kept myself up with it, washed myself out with floods of toast and water, and ate nothing, and refused all medicine. In twenty-four hours I had the pain under, in twenty-four more I had healthy appetite for meat, and was safe; but the agony of poor Johanna! forced to give me meat; for I ordered roast chicken instantly, when the doctors, unable to get at me, were imploring her to prevail on me not to kill myself, as they said I should. The poor thing stood it nobly; of course, none of them could move me one whit. I forced them to give me cold roast beef, and mustard, at two o'clock in the morning, and here I am, thank God! to all intent and purpose quite well again, but I was within an ace of the grave. But I know now

something of doctors that (well, I thought Moliere had had enough of them, but he's complimentary to what I shall be after this). Thanks for all your good love, but do try to understand me a little better, indocilest when I choose of human creatures, but yet your's most affectionately, John Ruskin."

Dr. Morton, of New York, claims that the healing properties of many mineral springs, attributed hitherto to chemicals contained therein, do in reality depend on imprisoned sunlight, which can now be revealed by the X-rays, radium, and ultra-violet rays. When a patient swallows a solution (notably of quinine) it gives off within him, if rendered fluorescent by radio-activity, sunshine rays which are luminous if radium be held near the body, so that practically the patient's interior is thus bathed in sunlight. A hope is entertained, with no little confidence, that this discovery may lead on to a scientific cure of internal cancer by an extension of the same means.

Scientific dentistry has recently discovered that by a patient's gazing intently for a while at an electric light within a bulb of blue glass, the operation of immediately extracting a tooth is rendered almost painless.

In past times sufferers from small-pox were surrounded by some English doctors with red fabrics as to bed clothing, curtains, and window blinds ; which practice has incurred modern ridicule, and amused derision. But Finsen, the famous scientist of Copenhagen, has ascertained that by excluding from such patients during this disease the chemical rays (blue, violet, and ultra-violet) of light, and admitting only the heat rays (red, and yellow) thereof, under such conditions no deep pitting of skin results from the pocks, and no secondary fever ensues. Finsen was first led to form these conclusions in 1832 when watching the successful treatment of small-pox patients in dark rooms.

It is claimed by some medical thinkers, and with no small show of reason, that water absorbs nerve energy, and may be purposely charged therewith, for a sick person's benefit, by " passes " from a sound, healthy, vigorous, plain-living, pure-minded individual, who lives much in the open air, and is of regular habits, without any excessive, or harmful indulgences ; such water should be forthwith drunk by the patient, between two meal-times. On this showing, the ideal master of the healing art is the man who has an abundance of nerve energy, some of which he can transfer at need, and likewise possesses the power of imparting to the

convictions of another an irresistible suggestion of health and vigour. Similarly, the susceptible invalid, lacking nerve health, and a complement of vital force, should drink occasionally a tumblerful of pure water which has been exposed to direct outdoor sunlight on a bright morning, or to brilliant moonlight at night when the moon is waxing towards its full; an exposure for fifteen minutes in each case will suffice. By this means the occult power of either luminary is conveyed through the water into the blood. The Sun is the father, and great source of energy on the physical plane, whilst the Moon is the mother, or restorer of nervous force, having a more intimate connection with magnetic attraction. To walk much in the moonlight, especially during the second quarter, and at the full, is undeniably beneficial in some states of nervous atony, (though it may be harmful at other times). The influence of the moon on the earth is strikingly shown by the tides produced thereby, this luminary being magnetic, whilst the sun is electric.

In an analogous way nerve energy can be transferred from the positive person to the negative, from the powerful to the weak, by taking both hands into those of the operator, or by putting one hand on the head of the patient, and the other over the large solar plexus of nerves embodied at the pit of the stomach. "A determined man," says Emerson, "by his very attitude, and the tone of his voice, puts a stop to defeat, and begins to conquer." In a somewhat like manner (as already related) the common, or garden lodestone of "magnetic iron" exercises certain physical effects, of which few persons are aware, for remedial purposes. "You would be surprised to know the uses people make of lodestones now-a-days," says a noted London mineralogist. "One gentleman I know never goes to sleep without a lodestone in his hand. Another keeps one on a little shelf at the head of his bed, and says he sleeps the better for it. Yet another man carries one about in his pocket. This piece (then in hand) I am going to grind flat for a lady, who places it on her face when suffering from neuralgia, and finds undoubted relief."

An American scientist has carried out certain investigations in a field of enquiry hitherto considered beyond the pale of exact science, the influence of mental emotion on the body. His researches demonstrate in a practical way the effect produced by various states of mind upon individual health. Suppose half a dozen men in a room; one feels depressed, another

remorseful, another ill-tempered, another jealous, another cheerful, another benevolent. It is a warm day, and they all perspire. Samples of their sudor, or perspiration, are handed to the psychologist; and under examination these several samples reveal all the emotional conditions particularized above, distinctly and unmistakably. Each disagreeable, or malign emotion is associated with its own particular poison, which reacts injuriously upon the person physically; whereby bad thoughts, and memories, undermine the energies; and among all the chemical products of such motions that of conscious guilt is the worst. If a small quantity of the sudor of a person suffering from a sense of guilt is placed in a glass tube, and exposed to contact with selenic acid, it will turn pink. And, corresponding to the evil emotion, there is a mischievous change in the tissues of the body, which depresses vitality, and engenders poison; whilst on the other hand every good emotion works an exalting, and life-promoting change.

Reverting to the subject of mineral waters, a distinct relation exists as to mineralization of the bodily tissues for good or evil, between the physical states of gout on the one hand, and tubercular consumption of the lungs on the other. Furthermore, the dietetic treatment of these diseases is respectively indicated by this relation. The gouty subject is over-mineralized, and must be fed accordingly, whilst the consumptive patient is under-mineralized, and has to be almost surfeited with urea (largely present in ordinary eggs), the obnoxious basis of gout. Chemically, the blood of the gouty and the consumptive are antagonistic. "The consumptive," says a physician who successfully conducts an important open-air sanatorium near New York City, "should eat all that a gouty patient may not eat." They chiefly lack the chlorides, and phosphates, whilst deficient also in acids; on the other hand, in gouty persons, the blood is too largely endowed with these ingredients, beyond a standard of health. With regard to eggs, as particularly well suited for the needs of the consumptive, it is found that this food differs intrinsically from all other forms, not only as to its nutrient capabilities, but also as to its stimulating effects. Usually the method is to begin with three eggs daily, taken raw if possible, either in egg lemonade, or perhaps (though less profitably) with a little whisky, or sherry; in most cases it is better to give the eggs raw, and unmixed, even by the patient sucking them from the

shell, as in the days of boyhood; else, he may smash one egg at a time into a cup, without breaking the yolk, adding thereto a dash of pepper, and salt, before swallowing it down like an oyster. It is surprising to find how soon a patient becomes accustomed to this regimen; even fussy, squeamish, neurotic women take their eggs without a murmur. As a rule, the eggs should be swallowed at the end of each meal, because they then interfere less with the appetite for the next meal. It is not enough to stop at three eggs a day, which are the minimum quantity, not the maximum allowance. "In the second week of treatment, if the eggs are borne well, I am accustomed to increase the quantity to two eggs three times a day, and thereafter to keep up the increase week by week, until twelve, eighteen, and even twenty-four raw eggs are consumed daily. The gain produced in flesh, and strength, under these conditions is most striking." It is a certain fact that the gouty uric acid state leads to a practical immunity from consumption.

As to the indisputable truth of planetary influences on our bodily welfare, or the reverse, John Swann, in his *Speculum Mundi* (1643), has put the question thus:—

"Senseless is he who without blush denies
What to sound senses most apparent lies:
And such is he that doth affirm the starres
To have no force on their inferiours."

"And, of how the brains of mice do wax and wane with the waxing and waning of the moon, being ever less when the light of that horned lamp is further from the full."

"The best laid schemes o' mice, and men
Gang aft a-gley."

For hydrophobia, with its horror of water as the leading symptom, in old Roman times the main general remedy advocated by Celsus, and others, was to cast the patient into water before he, or she, was aware of it, and this to be repeated daily for several days, "Since that which he feareth is the only medicine to cure him. Should the patient swim well, hold him under water a little while, till he have taken in some pretty quantity." Charles Lamb tells, in one of Elia's charming essays, about a pump which stood in Hare's Court, the Temple, and which was always going, the water of which "is excellent, cold, with brandy, and not very insipid without." "At one time," said Mary

Lamb about her brother, "he took to water like a hungry otter, abstaining from all spirituous liquors; but with the most indifferent results, as he became full of cramps, and rheumatism, and so cold internally that fire could not warm him.

WHALE, *Balæna mysticetus.* (*And see* FISH).

THE old Romans made use of Whale flesh as food, cooking it in various ways. Throughout England it was at one time customary to get similar food from the fishermen of Normandy, but the practice is no longer continued. Whale skin abounds in gelatine, and will make when stewed a most excellent jelly. The fish is graminivorous, its products being train oil, and sperm, baleen (whalebone), spermaceti and ambergris. "Whalebone" formerly meant ivory, as supposed to be derived from the bones of a whale, when the source of this material was little known, and when most of the ivory used in Western Europe came from the teeth of the Walrus. Shakespeare's lines in *Love's Labour Lost* bear reference to this fact:—

> "This (says Biron) is the flower that smiles on every one
> To show his teeth as white as whale's bone."

A remarkable Whale cure for chronic rheumatism has been known to American whalemen for some years. When a whale is killed, and towed ashore, (it does not matter whether it is a right humpback, a finback, or a sperm whale), and while the interior of the carcase still retains some warmth, a hole is cut through one side of the whale, sufficiently large to admit the lower half of the patient's body, from the loins to the feet; so that thus far he shall sink into the creature's intestines by the feet foremost, leaving the head and partly the shoulders outside the aperture. This hole is then closed up as completely as possible; otherwise the patient would not be able to breathe because of the volume of ammoniacal gas which would escape from the interior through every crevice of the opening left. It is these gases, which are of an overpowering and atrocious odour, which bring about the cure, so the whalemen declare. Sometimes the patient cannot stand such horrible immersion for more than an hour, and has to be lifted out in a fainting state; and to undergo a second, third, and perhaps even a fourth course on the same day, or on the day following. Twenty, or thirty

hours, it is said, will effect a radical cure, even in most severe cases, provided that there is no malformation, or distortion of the joints; and even in such instances the treatment gives great relief. One man, who was put up to his neck into the carcase of a small humpback, stood it for sixteen hours, being taken out at intervals of two hours; he went off declaring himself to be cured; a year later he had a return of the complaint, and underwent the treatment a second time. All the shore men thoroughly believe in the efficacy of this remedial practice, and by way of proof positive, assert that no men who work at "cutting in," or "trying out" a whale, ever suffer from rheumatism. And furthermore, some of them maintain that the "deader" the whale is, the better the remedy, "more gas in him," they say; and everyone who has been within a mile of a week-dead whale will believe the remark. Anyway, if there be a person, rheumatic or otherwise, who wants to emulate Jonah's adventure in a safe way, with a dead whale, let him write to the Davidson Brothers, Ben Boyd Point, Twofold Bay, N.S.W., or to the Messrs. Christian, Norfolk Island, and these valorous whalesmen will help him to achieve his desire. Sir George Grey (*Travels in Australia*) has written, "It was a sorry sight to see a pretty young woman enter the belly of the whale, then gorge herself therein with blubber, and issue forth anointed from head to foot, whilst bearing in each hand a trophy of the same delicacy."

When Oliver Goldsmith was relating to Dr. Johnson the fable of the small fishes who petitioned Jupiter for a King,—on seeing that the supercilious doctor was laughing at him, he turned smartly round, and said promptly, "Why, Dr. Johnson! this is not such an easy matter as you seem to think, for, if *you* were to make little fishes talk, they would talk like whales." In *Martin Chuzzlewit*, says Sairey Gamp, when at the London docks, to Tom Pinch. . . . "And which of all them smoking monsters is the Ankworks package, I wonder." "Goodness me! that is the Antwerp boat in the middle," said Ruth. "And I wish it were in Jonadge's belly, I do," cried Mrs. Gamp, appearing to confound the prophet with the whale in this miraculous aspiration.

From one kind of whale spermaceti is obtained, this being lodged as an oily liquid in a cavity within the upper jaw; it congeals after removal from the slaughtered animal into a yellow mass, then the oil is expressed out, and the residual cake of spermaceti is purified in water. When mixed with white wax,

and oil, it makes a bland cooling ointment, for dressing wounds and superficial sores. "Telling me the sovereign'st thing on earth was parmacity for an inward bruise" (*Henry IV.* Part I). Spermaceti is nearly pure *cetin*, and contains an alcohol, *ethal*. If made into an emulsion with yolk of egg, or almond oil, it serves as a popular remedy for raw, sore throats, and bronchial cough; likewise for an irritated condition of the membrane lining the bowels, or of the urinary passages. Respecting Ambergris, a restorative substance (excrementitious) got from the whale (*see* "Cordials"), it powerfully affects the nervous system, as containing a peculiar principle, *Ambrein*, with a resin, benzoic acid, and adipocere. From five to twenty grains of the odorous substance (which is dispensed by our druggists) are to be given for a dose. "It is," quoth old Fuller (1656), "a rare cordiall for the refreshing of the spirits, and sovereign for the strengthening the head, besides the most fragrant scent, far stronger in consort when compounded with other things, than when singly itself." An old provincial English drink was "Amber Caudle," made of ambergris, and esteemed restorative of the sexual powers. "You may talk," said Ravenscroft (1622) "of your amber caudles, your chocolate and jelly broths, but they are nothing comparable to youth and beauty."

WHEAT. (*See* BREAD).

FRUMENTY, a dish made of mulled wheat boiled in milk, and seasoned, has been known since very early days of English history. In the *Fabyan Chronicles* (1516), we read that "In the Great Halle of Westmynster the Kynge in his astate was servyd with iii coursys: Frument with venyson, etc., etc." It was also at one time a Lord Mayor's dish. For obstinate constipation, no food is so effectual as "cracked wheat," by which the difficulty is generally soon overcome; some of it should be steeped in water for about twelve hours, then boiled for an hour, and served with cream or milk. It may be further used for making a milky pudding therewith, containing also split raisins, free from the stones. Mr. Albert Broadbent, of Manchester, Secretary to the Food Reform Organization, declares that, "In cases of constipation long chronic, the entire wheat grain, bruised in some way, and thoroughly cooked, *never fails to bring about a cure.*" He "cannot praise it too highly."

A capital combination of wheaten flour with lean meat, freshly cooked, and then minced finely, has been given here (page 475) in the form of a loaf, wherein the meat is so thoroughly dissolved as not to be discernible. This, together with fresh butter, or fat of bacon, constitutes a complete food for a convalescent invalid. Likewise about buttered toast as admirably suitable for supplying bodily warmth, and energy, (assuming sound digestive powers), particulars have already been given, pages 116-117. This is especially appropriate for old persons. In *Great Expectations*, by Charles Dickens, 1858, "At the so-called *Castle* of Mr. Wemmick, in Walworth," says Pip, "we found Miss Skiffins preparing tea. The responsible duty of making the toast was delegated to 'the Aged.' And that excellent old gentleman was so intent upon it that he seemed to be in some danger of melting his eyes. The Aged prepared such a haystack of buttered toast that I could scarcely see him over it as it simmered on an iron stand hooked on to the top bar; while Miss Skiffins brewed such a jorum of tea that the pig in the back premises became strongly excited, and repeatedly expressed his desire to participate in the entertainment. We ate the whole of the toast, and drank tea in proportion; and it was delightful to see how warm and greasy we all got after it. The Aged particularly might have passed for some clean old chief of a savage tribe, just oiled." Again, (see *Alice through the Looking-glass*), in the song, "Very, Very Beautiful," of "Haddock's Eyes," or the "Aged, Aged Man," as sung by the White Knight, "slowly beating time with one hand, and with a faint smile lighting up his gentle foolish face," we pathetically read :—

"I'll tell thee everything I can;
There's little to relate.
I saw an aged, aged man
A sitting on a gate.
'Who are you, aged man?' I said,
'And how is it you live?'
And his answer trickled through my head
Like water through a sieve.

"I sometimes dig for *buttered rolls*,
Or set limed twigs for crabs;
I sometimes search the grassy knolls
For wheels of hansom cabs:
And that's the way, (he gave a wink)
By which I gain my wealth—
And very gladly will I drink
Your honour's noble health.'"

But, as Scripture tells us (reverently paraphrasing Saint Matthew), "Man shall not live by bread alone," any more profitably than by animal food in excess. The former would lead to fatness without a complement of strength, bodily and mental; whilst with regard to the latter mistake it may truly be said, "that way lies the lunatic asylum." When poor half-starved Oliver Twist, stung to madness by taunts from the bullying Noah Claypole about his dead mother, felled that craven-spirited charity-boy, and was dragged off to the parish beadle by Mrs. Sowerberry. "Its not madness, ma'am," said Mr. Bumble, after a few moments of deep meditation, "its meat! You've overfed him, ma'am!"

For staying the summer diarrhœa of infants, and young children, it is very efficacious to give wheaten flour properly prepared as a cooked ball for scraping. Two or three pounds of wheat flour should be tied in a bag of pudding-cloth, and then boiled continuously for twelve hours. After doing which let the outer crust be removed, so that the dry inner yellow portion can be grated, and used for making a thin gruel. This inner dry cake consists of dextrin. On the other hand wheaten flour from the bruised grain, or as contained in the whole corn, steeped, and boiled in the old-fashioned form of frumenty (which is fully described in *Kitchen Physic*) proves excellent against chronic constipation of the bowels. This culinary preparation, now almost absolete, was very popular in farm-houses a century ago. At Weydon Priors' village fair, Dorset, September, 1829, (*The Mayor of Casterbridge*, Thomas Hardy) was a certain refreshment tent among many others which dotted the Down. A little iron stove-pipe came out of it at the back, and in front appeared the placard "Good Furmity Sold Hear." "A rather numerous company appeared within, seated at the long narrow tables that ran down the tent at each side. By the upper end stood a stove containing a charcoal fire, over which hung a large, three-legged crock, sufficiently polished round the rim to show that it was made of bell-metal. A haggish creature, of about fifty, presided, in a white apron, which, as it threw an air of respectability over her, as far as it extended, was made so wide as to reach nearly round her waist. She slowly stirred the contents of the pot. The dull scrape of her large spoon was audible throughout the tent, as she thus kept from burning the mixture of corn in the grain, milk, raisins, currants, and what

not, that composed the antiquated slop in which she dealt. Vessels holding the separate ingredients stood on a white-clothed table of boards and trestles close by. This was very well so far for furmity, as nourishing, and as proper a food as could be obtained within the four seas; though to those not accustomed to it, the grains of wheat, swollen as large as lemon-pips, which floated on its surface might have a deterrent effect at first. But there was more in that tent than met a cursory glance! By closely watching the hag's proceedings might be seen the game which she played. With a wink from an observant member of the company his basin was passed up, in reply to her nod; when she took a bottle from under the table, and slily measuring out a certain quantity of its contents, tipped the same into the man's furmity. The liquor poured-in was rum; the man as slily sent back money in payment."

WHELK *and* **WINKLE.** (*See* OYSTER).

WHEY. (*See* MILK).

IT contains nearly all the phosphates of the new milk, from which it is obtained after the curd has been abstracted. Pepys drank it at the New Exchange, June 7th, 1665, "With much entreaty getting it for our money, and they would not be entreated to let us have one glasse more."

WHISKY. (*And see* ALCOHOL).

A DISTINCTION should be made, for any medicinal purposes, between malt whisky and grain whisky. Most of what is usually supplied is probably a blend of the two. Good Whisky for helping the invalid should be that which has been made from malted barley; it should not be less than two years old, and bearing a flavour which is not disagreeable. By being kept in the wood it grows mellow, and the harsher the taste when young the more full-flavoured the whisky when mature. In the United States, whisky is now chiefly distilled from corn and rye. The spirit is almost colourless at first, but becomes darker by age, or more frequently from being kept in sherry casks. Grain whisky is made in England from a mixture of barley, rye, and maize, and is distilled by steam, so that much of the flavour is lost in

the raw product. But grain whisky actually contains less fusel oil (a noxious property) than malt whisky. The legal limit of alcohol in this spirit is about forty-two per cent, which is the strength of ordinary whisky; so that a glass of whisky contains rather less than half a glass of absolute alcohol. Potheen is made, in contraband fashion, from molasses, being therefore more like rum than whisky. The original name of whisky was Usquebaugh, the "water of life." Irish (pot-still) whisky differs from Scotch in being procured from a mixture of malted barley with other unmalted grain, and the malt is not dried over peat, so that the taste is not smoky. An old Scotch distiller of note used to say about his whisky, that the Highland water was so pure, and the herbage it came through so fragrant, that he could discern in the flavour of the spirit, Birch, Broom, and Wild Thyme. Whisky obtained from pure, malted, Scotch barley, and well matured, has fine flavours, and a mellow roundness which grain spirit altogether lacks. Whisky Smash is a beverage containing whisky, with mint bruised, or smashed in the liquor, and is usually made tart with the juice of oranges, lemons, or other subacid fruit. Cecilia (in Miss Burney's story) tells about a man who talked in such a *whisky-frisky* manner that nobody could understand him: "Why it's tantamount to not talking at all."

For confirmed sleeplessness, Mark Twain tried Alcohol, successfully for a time, but in doses which had to be constantly increased, until finally they failed, whilst making him worse in his general health. "I suffered much," he says, "from insomnia years ago; it does not trouble me now, though my work is still heavy, and becomes more exacting as the years steal on. I began the search for a cure by drinking a glass of beer before going to bed; this gave a little relief for a short time. Then I exchanged my beer for a small prescription of two ounces of whisky. This worked the desired cure. It proved the real remedy, so much so that I began to like my medicine. The two ounces of Scotch grew to five ounces, then the trouble began again. It was the old story of taking too much of a good thing. The five ounces sent me off all right, and brought about a kind of angelic sensation in my head, but in a couple of hours sleep would leave me, and the old trouble come back to stay all the rest of the night. I then sought another remedy, and found it. Yes, sir, an infallible remedy! I got hold of it by accident.

It was a child's German grammar. I began to read it on lying down; but I never got through a single page at a time. Sleep came along, and never gave the grammar a chance. Try it, and you will find it a dead, certain cure." Thomas de Quincey, the famous literateur, who wrote *Confessions of an English Opium Eater*, (and who got to take nearly a large wineglassful of laudanum in all, as representing 320 grains of opium,) used at one time to "call every day for a glass of laudanum-negus, warm, and without sugar," just as another man might call ordinarily for a hot Scotch.

As to the old much-vexed question whether or not alcohol is a food, when taken in wine, malt liquor, or spirit, the most recent conclusion by unprejudiced authorities is that beyond certain narrow limits the poisonous action of such alcohol more than counter-balances its food value. Thus pronounces the *Lancet* in a current issue (October 22nd, 1904): "Alcohol has been proved to be a food in the sense that when used in small quantities the energy given off during its oxidation may be employed for some of the body's needs; but if at the same time it interferes with the healthy activities of that most important organ, the stomach, its food value will be overbalanced by its toxic effect. Similarly sea-water may be used in the boiler of a steam-engine, and the steam from its evaporation will transmit the energy of the fuel to the revolving wheels, but its corrosive action on the steel forbids its employment except in emergencies."

Certain non-alcoholic unfermented Nektar wines are now in the market, as made at Worms, on the Rhine. Their basic fruit juices are pasteurized, whilst no preservatives whatever are used in the manufacture. These wholesome wines contain from fifteen to twenty-five per cent of grape sugar, together with malic, tartaric, and racemic acids; also fixed salts of potash, soda, lime, magnesia, and iron. They help to obviate constipation of the bowels, being moreover antiseptic intestinally, also somewhat diuretic.

"Sound claret" (says the *Lancet*, October, 1904) "invariably contains the least proportion of acid of all wines. In health the individual would undoubtedly be better for drinking a pleasant light claret, rather than a glass of ardent spirit and water. Good sound claret need not contain more alcohol than does ale, or stout, while it is free from the extractive matters of the malt liquor." Nevertheless, after all said and done, English cider, the "Wine of the West Countree," is for ourselves the best and

most wholesome vinous beverage, and withal of home production. So testifies the smock-frocked Devon labourer, weather-beaten, rosy, and wrinkled of face. "Ay, buoy, an' when th' cider du be gude, 'tis th' best thing fur a man tu drink th't iver th' Almighty made! Aale du be gude; stout be summat none so ill; some folk du set gert store to furrin wines, and sich loike (though I niver taasted mun mysen), but gie oi gude cider, an' if mun don't loike mun, there be no countin some volks judgment." Old Nicholas Culpeper (1652) stated "the Vine is a gallant tree of the sun, very sympathetical with the body of man, which is the reason spirits of wine is the greatest cordial among all vegetables."

In the days of our grandfathers a calmative drink was in vogue known as Julep (from an ancient Arabian word). This drink contained opium, with mucilage. The title is still retained by doctors for certain medicinal waters, but alcohol has been substituted for the opium therein. In Scotland, for a cold recently caught, a rob of black currant jelly is taken with whisky toddy, generally having the result of a cure straightway. The French make a similar cordial *liqueur de cassis*, from black currants, "*qui est stomachique, et stimulante.*"

WINES. (*See* ALCOHOL).

As "Milk is the wine of infancy, so wine is the milk of old age." It is well worthy of note that as remarkably helpful against diabetes, a wine known as the Vin Urané Pesqui is to be scientifically commended, and has repeatedly proved of undeniable efficacy. This wine consists of old Bordeaux with which Uranium (a specific antidote to diabetes) is properly incorporated. Under its use (as a pleasant beverage) the amount of sugar in the urine becomes much reduced, whilst the general health is sensibly improved. The metal, Uranium, when taken experimentally in varying large doses by healthy provers, has been found to produce all the symptoms of confirmed diabetes.

YEAST. (*See* BREAD).

THE Barm (or Levurine) which has been told about when treating here of bread, merits some fuller notice as an admirably useful form of yeast against the *staphylococcus pyogenes*, or mischievous

microbe which is causative of most purulent inflammations in the human subject. This Levurinè is actually fresh barm from the brewhouse, dried skilfully, and reduced to a powder, of a light chestnut colour, with a smell of fermenting beer. Treatment of putrid, or septic inflammations by it is found (in Paris) to be much superior to that by the yeast of fresh beer. It is well borne by the stomach, and can be given freely, even up to six teaspoonfuls of the powder in a day ; such an energetic course being necessary when the septic poisoning by disease is intense. Furthermore, it will act as preventive of microbic assaults, if taken with this view at the time of surgical operations, where infection seems a thing to be feared. For unhealthy boils, or a sloughing carbuncle, as well as for septic pneumonia (lung inflammation of a low, prostrating type), or septic rheumatism, when acute, Barm, administered liberally in the manner now enjoined, may justly claim curative powers almost positively specific. The best way of giving it is by dissolving doses (a teaspoonful at a time) of the powder in a little beer, to be taken between meals ; or it can be exhibited in cachets, as to be had from a druggist for any such purpose. Professor Doyen, of Paris, has brought this potential remedy before the notice of his medical brethren in the *Revue Critique de Medecine, et de Chirurgie*. Fresh Beer Yeast is employed medicinally as an antiseptic stimulant in low fevers of a putrid type ; it is of much service when, because of inflammatory risks, wine is not admissible.

Virgil, the familiar Latin poet, has related in Homeric fashion the toils and troubles encountered by Æneas and his followers when seeking a friendly resting-place, where they might again establish themselves after their long wanderings since the fall of Troy. Oracular prophecy had foretold, through Ascanius, the son of Æneas, a happy termination to their laborious quest.

" Quum te, nate, fames ignota ad litora vectum
Accisis coget dapibus consumere mensas ;
Tum sperare domos defessus, ibique memento
Prima locare manu, molirique aggere tecta."

" My son, when famine on an unknown shore
Shall make thee, failing food, *the very plates devour*,
Then, worn and wearied, look to find home-ground,
And build thy walls, and back them with a mound."

Accordingly, when the Trojan band, led by Æneas, entered Italy, and sailed up the Tiber, prior to laying the foundations of Rome, "being constrained by hunger," they proceeded

> "Violare manu, malisque audacibus orbem
> Fatalis crusti patulis, nec parcere quadris."
>
> "Their table cakes by tooth, and hand, with zest,
> Then to consume:
>
> ("Heus; etiam mensas consumimus? "inquit Iulus.")
> 'What! eating plates as well?' Iulus called in jest."

thereby fulfilling the prediction of a favourable haven from the Gods at last. Similarly, for ourselves, at the conclusion of our present lengthy task, we make bold to adopt the classic metaphor, and, lacking further foods to discuss, we thank the fates and devour our tables.

> "Haec erat illa fames: haec nos suprema manebat
> Exitiis positura modum."
>
> "This was that famine: this was found the last
> Of all our search: the tedious term, and bound."

Materially, of course, we cannot here eat the dishes whereof the contents are furnished, to be "read, marked, learned, and inwardly digested." Nevertheless, the ability is granted us to deduce a mental meal from the *mensæ* whereon our many topics have been served in the pages now ended; and to hail a happy final issue to our labours through the moral fodder of the homely

Willow-Pattern Plate,

"Few persons know what an instructive fiction,
Familiar to our eyes from childhood's date,
Is told us in dramatic dark-blue diction
At meal-times on a Willow-pattern plate.

So, I propose to represent the story,
And to perform its plot upon my page;
But let me first depict in all their glory
The scenic beauties of our stone-ware stage!

Be seated, pray, and take in hand a platter,
Fetched by trim Phyllis from the kitchen shelf;
Then, like a classic Chorus, I will chatter
The while you look attentive on the delf.

—Just where an actor from the left would enter
Its inner circle, splendid buildings stand,
Having a proud Pagoda in their centre,
With upper chambers, opulent and grand.

High above these an Orange-tree outreaches
  Its golden-fruited boughs, a background fair;
And on each side of the Pavilion, peaches,
  With tender green, and crimson deck the air.

In front a spacious Park the Palace faces,
  Fenced at its foremost lines with palings strong;
Whilst, on the right, approach from other places
  Is hindered by an Ocean, broad, and long;

A bridge runs over to the gardener's dwelling
  Built on an island lying near the shore;
Its one small tree of poor resources telling,
  Plain as the Cottage with a single floor.

Deep-rooted near the bridge, with boughs depending,
  A gnarled old Willow weeps, and sheds its leaves,
In token that the summer-time is ending,
  And mindful of the tale our drama weaves.

Far off across the sea, where Stage direction
  Says a 'right upper entrance' must be made,
Another Island needs remote attention,
  On which much cultivation has been paid.

Thus is the picture of our Stage completed,
  With middle scene, and side-wings duly set;
Now, while you still are comfortably seated,
  The curtain rises, and the play you get.

—In Act the First, two children we discover,
  Left by their parents to a Guardian's care,
Sweet little Tsing, and Lin, her promised lover,
  He a brave boy, she five years old, and fair.

Lin, when he comes to manhood, will inherit
  The Park, Pagoda, and the buildings grand;
Likewise, if faithful still, he then will merit
  Fulfilled possession of Tsing's heart, and hand.

But Fang, a Mandarin of dastard cunning,
  Into whose care these orphan children come,
Determines while their youthful years are running,
  To seize by fraud their heritage, and home;

He takes the lad to sea, for pleasure sailing,
  Then turns him at the dead of night adrift;
Deplores his loss with much pretence of wailing,
  And shirks suspicion by the crafty shift.

Sweet little Tsing he holds in close seclusion
  Year after year, within the Palace bounds,
Locked on all sides, as shown, in stern allusion,
  By the key-border which our Plate surrounds.

She, mindful always of the love departed,
  Maintains her courage, and on hope depends,
Plies patient threads, and bides her time true-hearted,
  Trusting to Lin. And so the First Act ends.

—Next, on the Island far across the ocean,
Where has been made the fruitful home of Lin,
Who by the gardener's son, with much devotion,
Was saved, we find the Second Act begin;

Together Lin, and he, escaped the water,
And, by a marvel, reached this distant shore;
Meantime at home the gardener's faithful daughter
Was placed by Fang to guard Tsing's chamber door.

Through her comes round at length the glad assurance,
Told secretly to Tsing, that Lin survives;
Through her to let Lin know what long endurance
She suffers, Tsing by needle-work contrives.

Wrought by her skill in silk, a plain recital
Of Fang's perfidious wiles thus reaches Lin;
With Deeds she finds which clearly show his title
Herself and all his birthright back to win.

True to her troth she bids him cross the water,
And, grown to manhood, claim her as his wife,
Confronting Fang by ways her wit has taught her
On chance occasions in her captive life.

Lin joyfully obeys when backward beckoned,
And meets her purpose with responsive heart;
He straight sets sail;—and thus on Act the Second
The curtain drops as Lin prepares to start.

—In Act the Third, and last, our Play, proceeding,
Conveys a Moral, helpful, and divine;
Its scene the Bridge; its characters the leading
Performers on our Stage,—arranged in line:

Lin on the right speeds forward, swiftly bearing
His box of Deeds for refuge towards the strand;
Sweet Tsing, whose rescue tells of dauntless daring,
Takes middle flight, with distaff in her hand;

Fang from the left pursues, intent on slaughter,
With scourge upraised (and hirelings at his heels);
He drives the luckless pair into the water,
Half slain already by the blows he deals.

When, lo! a change of scene we view with wonder!
The powers on high work for their children's good;
With flash of lightning, and loud peal of thunder,
A rugged Willow looms where Fang had stood;

Its knotted trunk, and downcast branches drooping,
Tell of fraud punished by avenging fate;
A record of remorse—amid the grouping
Of Actors on our Willow-pattern Plate.

Above, the sun shines forth, where, fondly mated,
A loving pair of turtle-doves appears;
Sweet Tsing, and Lin, thus happily translated
As plighted spirits to celestial spheres.

Our lesson is—that truth, and trust unswerving
Cast on the waters bear eternal fruit;
And heavenly tunes are taught to the deserving,
The music of whose days on earth was mute.

As for our harps—we hang them on the Willows,
Sadly through life, but striving for the best;
Then at the last, like doves across the billows,
So shall we fly away, and be at rest."

"*Solvitur: hic victor cæstus, artemque repono.*"

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